DOCUMENT RESUME

ED 116 885 RC 008 95

AUTHOR	Bowes, John E.; Stamm, Keith R.
TITLE	Development Priorities in the West River Region, North Dakota: A Social Attitude and Communication Analysis.
INSTITUTION	Washington Univ., Seattle. Communication Research Center.
SPONS AGENCY	Department of the Interior, Washington, D.C. Office of Water Resources Research.
PUB DATE	Oct 74
NOTE	155p.; Some pages in the appendices may not reproduce well
EDRS PRICE	MF-$0.76 HC-$8.24 Plus Postage
DESCRIPTORS	*Agency Role; Change Agents; Communication (Thought Transfer); Community Information Services; *Community Involvement; Community Leaders; Industry; Information Needs; Life Style; Program Development; *Regional Planning; *Rural Development; Surveys; Tables (Data); *Water Resources
IDENTIFIERS	*North Dakota (Knife River Basin); West River Diversion Project

ABSTRACT

Presenting a descriptive and prescriptive analysis of the social variables important to planning and informed public participation in the development of the West River Diversion Project in North Dakota (WRDP), this report is organized via the following sections: (1) Knowledge and Evaluation of the Project (How aware are people of the WRDP and its implications and are they in favor of it?); (2) Priorities and Their Evaluation for Regional Development (What prime needs do people see for the West River area and do these jibe with present emphasis on water management and heavy industry?); (3) Awareness and Evaluation of Development Agencies and Their Policies (How well does State and Federal agency performance stack up in the public's mind?); (4) Agencies as Solvers of Regional Development Problems (Which agencies are associated in the public's mind with water control and regional development?); (5) Communication between Citizens and Agencies (How accurate is citizen-agency communication and to what extent are citizens and agencies in agreement on development priorities?); (6) Information Sources (Where can people obtain information on development activities?); (7) Lifestyle and Optimism (How attached are people to the region and how willing are they to see change?); (8) Basic Sample Characteristics (community leaders, citizens, and agency representatives). (JC)

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DEVELOPMENT PRIORITIES IN THE WEST RIVER REGION, NORTH DAKOTA

A Social Attitude and Communication Analysis

John E. Bowes

and

Keith R. Stamm

with the cooperation of:

The Communication Research Center
The University of North Dakota
Grand Forks, North Dakota 58201

The Communication Research Center
The University of Washington
Seattle, Washington 98195

October 1974

RC 008 959

Funds for this project were supplied by The North Dakota State Water Commission and the U.S. Department of Interior, Water Resources Research Institute, Grant A-041-NDAK.

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ACKNOWLEDGEMENTS

We've been fortunate in this study to secure the assistance of many able people performing a multitude of tasks. Special thanks are due to Dale Anderson of the Water Resources Research Institute and to Delton Schulz of the North Dakota State Water Commission for having encouraged and funded this investigation. Thanks are also due Herbert Strentz, Chairman of the Journalism Department and Dean Bernard O'Kelly of the College of Arts and Sciences at The University of North Dakota for their welcomed encouragement and help over the two-year duration of the study.

Many students gained their first exposure to survey research in assisting our project. Special thanks are due to Henry Lebak, graduate research assistant, for capably managing the many details of coding and data processing. Our student coders, Randy Keller, Dianne Demars, Mark Peterson, Jim Kusler and Becky Zander, pursued with competence and good humor the many painstaking data preparation tasks.

Our field interviewers deserve considerable credit for the excellent job they performed. Myron Freeman, our field supervisor, coped admirably with up to six interviewers, innumerable checking and bookkeeping tasks, and practical problems ranging from interviewer training to transportation. The interviewers, Dale and Delores Zieman, Elizabeth Arneson, Leah Henke and Riva Stanley, have our lasting thanks for jobs well-done.

Finally, we extend thanks to citizens of the Knife River Basin and personnel of The North Dakota State Water Commission, The North Dakota Game and Fish Department, The U. S. Soil Conservation Service, The U. S. Forest Service and The U. S. Bureau of Reclamation for their generous cooperation and advice.

A Note on Reading This Report

In preparing this report, we have attempted to satisfy two audiences: one with no particular expertise in survey research, desiring a summary description of our findings, and a second with expertise, interested in the details of our methods and the strength of the relationships we found. Given these often competing demands, we attemped a middle course in our style. All chapters, save the introductory one and conclusions, have summary sections on the last few pages. These are designed to give readers the gist of our results, when read together with the introductory chapter and conclusions. Similarly, most data have been presented in graphic form (as histograms) to aid visual comparisons of differences and relationships. In these ways, the reader interested in a quick overview is probably best served.

Readers desiring detailed discussions of findings and an insight into the conceptual framework for the study are encouraged to read the report in its entirety. In many instances, in our tables and figures, we have provided some indication of the statistical strength of the differences and relationships found. Weak trends and differences were usually excluded from our discussion altogether.

The actual wording of questions posed to respondents can be seen in the facsimile copies of the questionnaire instruments in the appendix. Due to the combining of data often from many questions into our figures and tables, we usually lacked the space to provide verbatim indications of question wording in the body of this report.

For similar reasons, we also excluded many of the details and field records of our interviewing procedures. Needless to say, some questions asked were not tabulated in this study due to their lack of relevance, inability to detect differences among our sample groups or vague responses obtained. Taken together, presentation of this information would have doubled the length of the report with little gain in useful information and a considerable gain in the cost of publication. The authors are, of course, willing to consider requests for specific information beyond this report as their time and resources permit.

This report presents an intensive analysis of social variables - such as public attitudes, community needs and information - that are important to the planning and informed public participation in the development of the West River Region. This analysis has both predictive and descriptive goals, meaning that not only do we want to describe the present state of public opinion on regional development, but also gather information predictive of eventual public satisfaction with the development results.

There are few guideposts or recognized standards for research of this kind. No widely used group of questions have repeatedly demonstrated their utility in similar settings in the past. However, with the growth of policy and evaluative research in the social sciences, several distinguishable approaches have evolved. Perhaps the most used is analysis which attempts to predict social changes based on economic shifts in the community. Since this approach is covered by others assessing West River development, we devoted little attention to this type. Demographic analysis, an aggregate look at population shifts, migration patterns and other population parameters was also rejected because of the inclusion of such information in the economic analyses and its lack of description for the attitudes and needs underlying these characteristics. A third approach - an historical analysis of institutional policies and power groups - was rejected in favor of surveying opinion in the present.

The method we used is based on recognized opinion polling techniques to assure a representative assessment of public attitudes and information on West River development. Central to well-planned development, we believe, is that all major groups involved in this effort have shared understandings about project goals and outcomes - both beneficial and harmful. Consequently, a major share our analysis focuses on communication about and public understanding of development. This communication centered approach, we feel, is especially appropriate, given some of the unique characteristics of the changes facing the West River Region. These are:

1. The availability of few examples to aid in identifying likely outcomes from the development of the region. Partly this is because changes planned are on such a large scale, but also because projects which affect the environment have subtle and complex consequences. For example, no coal gasification plants of the size planned for the state are available for public inspection. Moreover, the effects of these plants on matters ranging from wildlife to the economy of the region are hard to understand for experts, much less the public. Thus it is critical that what information is available be structured to the needs of the public and be disseminated efficiently with little distortion.

2. The rapid speed of development. In comparison to, say, the 30-year evolution of nuclear power plants or the relatively unhurried lifestyle of the West River Region, water resource development and contingent power and industrial development are occurring at an accelerated pace. Encouraged by energy shortages and national desires for energy self-sufficiency, time available for information gathering and debate may be limited.

3. The inability of local media often to cope with the scale and complexity of changes planned or underway. Media serving the West River Region tend to be small and unspecialized, affording little expertise for properly digesting development issues in a form clear, yet not over-simplified for public use.

4. The development of considerable controversy over exploitation of energy resources and the changes this work implies for lifestyle in the area. Presently, much of the information in circulation is disseminated by sources with vested interests. Information of this kind frequently tries to propagandize, pressing the consumer to agree rather than understand all points of view in the issues raised.

From the foregoing, it should be evident that our interest lies not only with the immediate public concerns over water management questions addressed in the West River Diversion Project, but also the far reaching implications this project has for industrial development and changing lifestyles in western North Dakota. Failure to effectively consider wider consequences are presently visible in recent controversy over the Garrison Diversion Project in the central part of the state.

Thus we return to the importance of information and understanding created among interests involved in the project. Does each understand what other interests have in mind when they speak of regional development? Are members of the public aware of the changes planned and their consequences? Do state and federal agencies understand public preferences and are community leaders representing well to officials the feelings of their communities? The prevalence of plentiful and quality information, public use of these resources coupled with development officials sensitive to their attitudes minimize the negative impacts and "surprises" once the projects are underway. Ideally, our findings will not only help diagnose deficiencies in public understanding of West River area development, but also suggest public needs which can be incorporated into development plans.

To accomplish these goals, the results of this study are organized into the following sections:

1. Knowledge and Evaluation of the Project. How aware are people in the West River Diversion Project and its implications? Are they in favor of it, given some knowledge of the project?

2. Priorities and their Evaluation for Regional Development. What prime needs do people see for the West River area? How do they jibe with present emphasis on water management and heavy industry development?

3. Awareness and Evaluation of Development Agencies and their Policies. How well does state and federal agency performance stack up in the public's mind?

4. Agencies as Solvers of Regional Development Problems. Which agencies are associated in the public's mind with water control and regional development?

5. Communication Between Citizens and Agencies. How accurate is the communication? To what extent do they agree on development priorities? What information sources improve the quality of communication?

6. Information Sources. Where do people obtain information on development activities and changes?

7. Lifestyle and Optimism. How attached are people to the region and what is their willingness to see change take place.

8. Basic Sample Characteristics. What were the people like whom we interviewed?

We feel this plan offers clarity and economy of explanation for the sizeable quantity of data generated in this research.

Before we begin a detailed examination of findings, some explanation is necessary for the methods we used to collect the information reported in this study. A number of successful approaches have been used in the past. Regional meetings or conferences have been called, exemplified by the Little Missouri Grasslands Study,[1] to exchange information on regional development and to tap the opinions of the public, development experts and agencies. Other methods used range from talking with key leaders in the West River Region to conferences with service clubs and regional officials.[2] The approach used in the present study differed somewhat in that we attempted to identify a representative cross-section of individuals involved in development of the West River area.

In most rural states like North Dakota, discussion about change and development follows a path from government agencies to community leaders and the general public.[3] Information on public sentiment usually is relayed by community leaders back to government agencies. Participation of country water management boards, land use planning councils and county soil conservation committees often formalizes these leaders as information brokers between citizens and government agencies in regional development matters. Consequently, these three groups - the general public, community leaders and development agency personnel - became the focus of analysis and comparison in this study.

A variety of procedures were used to generate samples of these groups. General population respondents were selected according to a probability sample of the Knife River Basin, North Dakota. This five-county area (see map, figure 1) provided a rather good cross-section of small town residents, farmers and ranchers who comprise the primary population groups of the West River Region. Moreover, the locale has the only large scale power generation and surface mine sites which have been in operation for a comparatively long period of time. Thus residents of certain areas of the Knife River Basin have had first-hand experience with the industrial activity anticipated for expansion in the region.

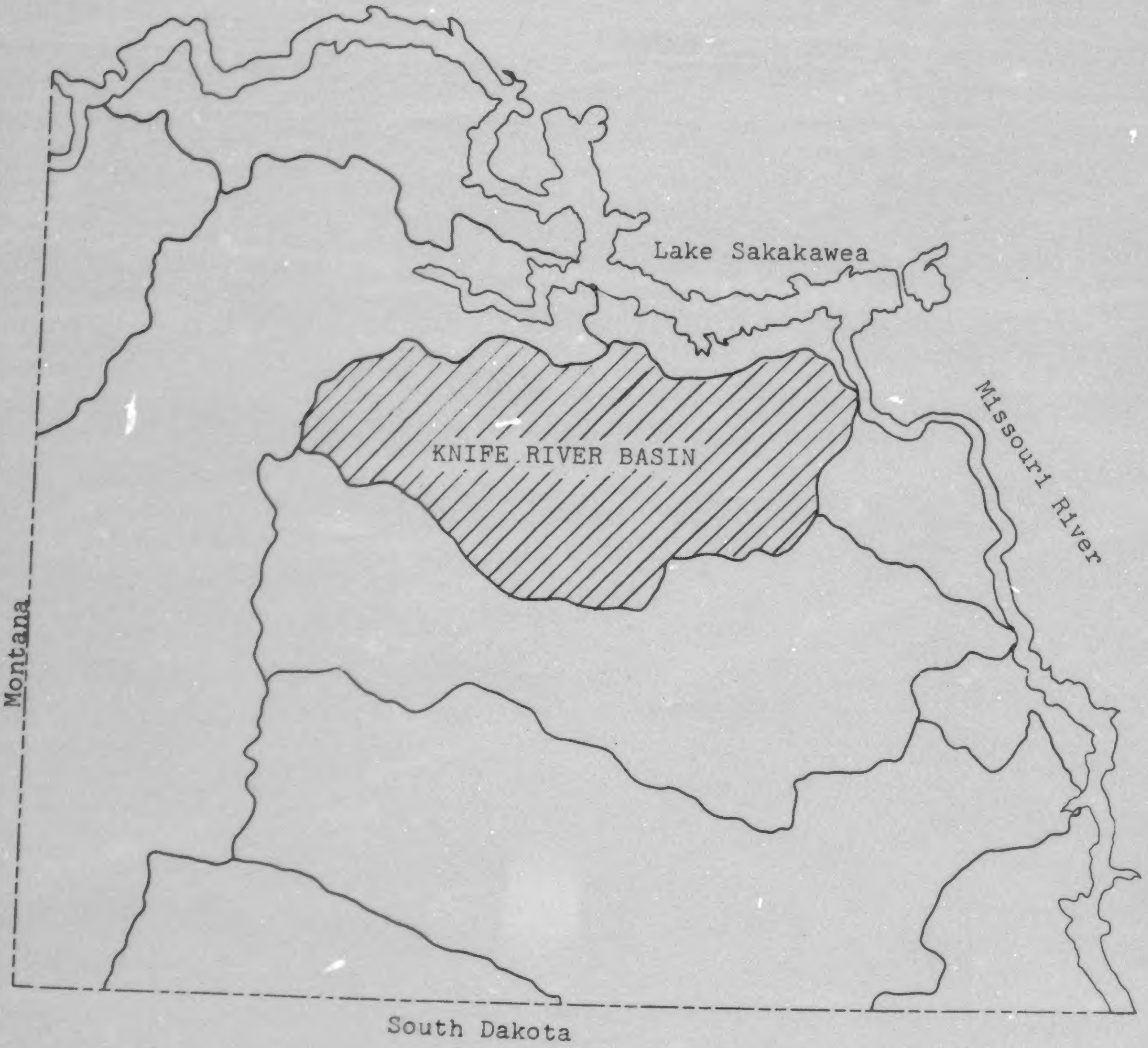
By surveying only the Knife River Basin, we ignored, of course, much of the West River Region. Briefly, our reasons for doing so hinged on:

1. Cost and optimization: Survey research is an expensive proposition and no reliable cost estimates were available for a survey of the entire region. Consequently, having limited funds, we chose to investigate thoroughly a smaller area which we felt would typify the larger region. Now that we have good cost estimates based on present work and know basic statistical characteristics of West River residents, we can more judiciously expand the scope of investigation with remaining funds, effecting savings over the costs of work done to date.

2. We wanted to leave portions of the area for later study, uncontaminated by previous encounters with our field personnel. This procedure is vital to checking the effectiveness of followup efforts to determine shifts in public attitudes toward West River Diversion at a later date.

3. Other surveys: Certain portions of the region had been contacted by interviewers for other organizations asking questions about similar topics. People experienced in polling know that these respondents would respond to a second, similar questionnaire differently than would have

Figure 1: The West River (N.D.) region. Respondents, with the exception of agency personnel, were selected only from the Knife River Basin. Counties and municipalities included in this region are listed in table 25.


Lake Sakakawea
KNIFE RIVER BASIN
Missouri River
Montana
South Dakota

> been the case, had they not been previously contacted. In short, we wanted to avoid interviewing those "primed" with answers to our questions.

Most random sampling procedures demand that all residents of the sample area have a known chance of inclusion into the group interviewed. This process assures, within the limits of good sampling practice and statistical error, that results presented in this analysis are representative of the area. General sample respondents were allocated (stratified) between rural and incorporated proportionate to population characteristics determined in the 1970 US Census (48% rural, 52% incorporated areas). Detailed maps and census information were used to develop an area probability sample of the incorporated and rural strata. Some 310 respondents were selected in this way, and interviewed, though 64 additional respondents (20.6% of the total) had to be selected to adjust for original respondents lost through refusals, not-at-homes and vacant homesteads. Some basic demographic characteristics of this sample are detailed together with similar characteristics for community leaders and agency personnel later in this report.

Somewhat different procedures were used to determine a sampling of community leaders. In this instance, a master list of leaders was assembled from rosters of local government personnel, local press accounts, nominations from local informants and listings of prominent citizens of the area. The master listing was comprised of some 130 names from the six-county area surveyed. Through random procedures proportionate to the community population, 40 leaders were selected for interview. Ten replacements (25%) were required to supplement the original selection to compensate for refusals, etc. As with general sample respondents, community leaders were contacted by our field personnel for personal interview.

Agency respondents were selected from five state and federal offices involved in West River area development, including The Bureau of Reclamation, The North Dakota State Water Commission, The US Soil Conservation Service, The State Game and Fish Department, and The U.S. Forest Service, Medora Station. The selection of these agencies was based on their representation of a rather broad band of approaches to regional development needs. Some, such as the U. S. Forest Service, maintain a primarily conservation, preservationist view, while others, such as the State Water Commission, seem more intensely involved in development of resources and improving economic activity.

From each agency, a list of supervisory personnel working either in the state office (Bismarck) or in field offices in the West River area was obtained. A group of some 94 respondents were thus assembled. Mail-type questionnaires were sent to each which secured an 83% response rate or 78 completed questionnaires. Since this procedure was a census rather than a sampling of personnel, no replacements for missing questionnaires, refusals, etc. were possible. By usual standards for mail-in questionnaires, this rate of response was extremely good.

Field work was completed in the late summer and fall of 1973. Two attempts were made by interviewers to contact not-at-home respondents. Similarly, two follow-up mailings were used to encourage tardy agency personnel to reply to the mail questionnaire. A five per cent subsample was used as a validation check, a procedure which ascertains that interviewers actually contacted individuals scheduled and achieved reasonable accuracy in recording their responses.

The actual questionnaires used in this study for the three sample groups are reproduced in appendix A of this report. All questions used went through at least two, often more pre-test stages where their understandability and utility to the purpose of this study were screened. Information from completed questionnaires was transferred to magnetic tape for data processing. Coding procedures involved in this transfer were verified and checked for consistency electronically or, for hand-coded items, were retabulated on a subsample basis, using as a criterion for inclusion in the report at least a 90% reproducibility.

Notes:

[1] Little Missouri Grasslands Study is a multiple land use study of southwestern North Dakota funded by an urban planning grant from the Department of Housing and Urban Development. Some six reports are available on the study from The North Dakota State University, Fargo, North Dakota 58102.

[2] See: Humphrey, F. Charles. Image Attitude Survey: Oliver County North Dakota, February 1974, North Dakota Cooperative Extension Service, Fargo, North Dakota 58102 (mimeo)

[3] Rogers, Everett M. Diffusion of Innovations. New York: Free Press, 1962.

KNOWLEDGE AND EVALUATION OF THE PROJECT

How can the thoughts of individual citizens toward a project like the West River Diversion be described? And of what practical use would such descriptions be to the public and to policy makers? These are questions that we intend to discuss in this chapter, in addition to presenting the descriptions that we have compiled in the field.

Typically, investigators of the social impact of development projects have sought to describe citizen thinking in terms of attitude measures. By describing citizens' thoughts in attitudinal terms, investigators have intended to give a direct assessment of actions citizens would be likely to take toward the project and/or toward the sponsoring agency. For example, if citizen attitudes toward a project are largely negative, it would be taken as a sign that the project should be abandoned or restudied because of the likelihood of actions in opposition to it.

Our study of the West River Diversion Project deviates somewhat from the traditional attitudinal approach by obtaining data that we think is just as useful, if not more so. Unfortunately, the practical importance of other descriptive approaches is not always as obvious and the "obvious" utility of attitudinal data is often deceptive. This presumed utility rests on an assumption of a close tie between attitudes and behavior, that what people think and feel is rather automatically translated into action.

Because of the frequent difficulty in demonstrating simple, direct connections between the way people think and the way they act, the brunt of our analysis is not placed on this shakey principle. Rather we are asking whether people are really prepared to make judgments and decisions on development and whether their decisions are properly informed ones. Having taken this viewpoint, we needed to devise ways of describing how well informed citizens appear to be. We found no one "best" approach, and so we adopted several that were both scientifically sound and feasible within the context of a field survey.

At the lowest level of involvement, we observed awareness of the project, reasoning that any other knowledge that citizens had could not be applied without awareness of the project itself. Lack of awareness would indicate a very low level of information.

At the next level, we asked about relevance of the project. That is, did citizens perceive that the project will have consequences (or other connections) to him? Unless a citizen attached some relevance to the project, there would not be even a minimal basis for holding a serious opinion.

In addition, we attempted to determine what additional information the citizen had, as a possible basis for his opinion. This included both his knowledge of benefits/disadvantages of the project, and his ability to specify probable consequences of the project (both planned outcomes and side effects). A citizen who knows both benefits and disadvantages of the project is considered to be more fully informed than a citizen who knows only benefits or only disadvantages. Previous research by the authors has shown a tendency for citizens to become more fully informed on a project's benefits than its disadvantages, a trend that can sometimes be traced to a one-sidedness in public information programs (Stamm and Bowes, 1972).

Lastly, we included a measure of opinion. But the significance of this measure is not viewed only in terms of a "go" or a "stop" signal for planners. It is possible that opinion will be lacking altogether; perhaps indicative of an absence of relevance and/or knowledge of useful evaluative criteria. The meaning of opinions will not be taken at face value, but will be interpreted with regard to the kind of information on which they are based. In our judgment, a predominance of favorable opinion that is based on inadequate information can be an extremely hazardous condition for both planners and the public; only in a very narrow view could such a condition be regarded as a sound basis for pursuing development projects.

Over-all awareness of the West River Diversion Project was relatively high - especially for a project that is only in the planning stage (figure 2). The level of awareness observed for the general public - 50 per cent - compares favorably to the level found for a Corps of Engineers project in Northeastern North Dakota (63 per cent), and the Corps project was at a much later planning stage when the survey was made (Stamm and Bowes, 1972). It is probably safe to project that awareness of the West River Diversion Project (WRDP) won't get much above the 50 per cent level without an intensive information campaign.[1]

Comparing across all three of our samples, the level of awareness was highest among community leaders (COML) (77 per cent) and lowest among agency (AGCY) representatives (31 per cent). We expected to find higher awareness among COML, and this result supports our treatment of COML's as an informed link between agencies and the public. The low level of AGCY awareness was not expected - if anything, we expected a higher level of awareness than for COML's. We can partly explain this result by noting that many agency representatives worked out of offices in Bismarck and may not have had much involvement with the West River area. But this is not an entirely comforting explanation, considering that our agency census was taken only from those state and federal agencies concerned with this type of regional development. If information about WRDP is to flow from agencies to community leaders to the public, as our model has assumed, then the AGCY to COML link would certainly be strengthened by a higher level of awareness among AGCY personnel.

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[1] And it should be noted that the results of research on information diffusion show that the level of awareness achieved is not lasting unless publicity is continued. This is simply because some people will soon forget what they've heard.

Although community leaders were more often aware of the project, they were less certain about some of the consequences of the WRDP. For example, leaders were less certain about the effects of the WRDP on their jobs (figure 3). They were less likely than the public (GENS) to say the project would not affect their job, and more likely to say they didn't know how their job would be affected. For both groups, the knowledge of job consequence was very low - much lower than awareness of the project itself. The need for information beyond simple project awareness is clearly indicated here.

Lack of knowledge of probable consequences is again reflected in the benefits and disadvantages of the project provided by both the public and leaders (table 1). The most common answer by far was "don't know." Even within the AGCY group, most respondents did not know any benefits and/or disadvantages of the project. Over-all, AGCY respondents listed more benefits and disadvantages - in particular, more environmental, economic and social disadvantages - than respondents in the other groups. But contrary to expectation, COML's were not more informed in this area than GENS.

Although the level of evaluative information was generally very low, it is significant that lack of knowledge was no more prevalent for disadvantages than for benefits. At least some balance prevails. This is not always the case. For example, an earlier study of a proposed dam and reservoir at Park River, North Dakota, revealed considerably higher knowledge of benefits than

Figure 2: Awareness of the West River Diversion Project

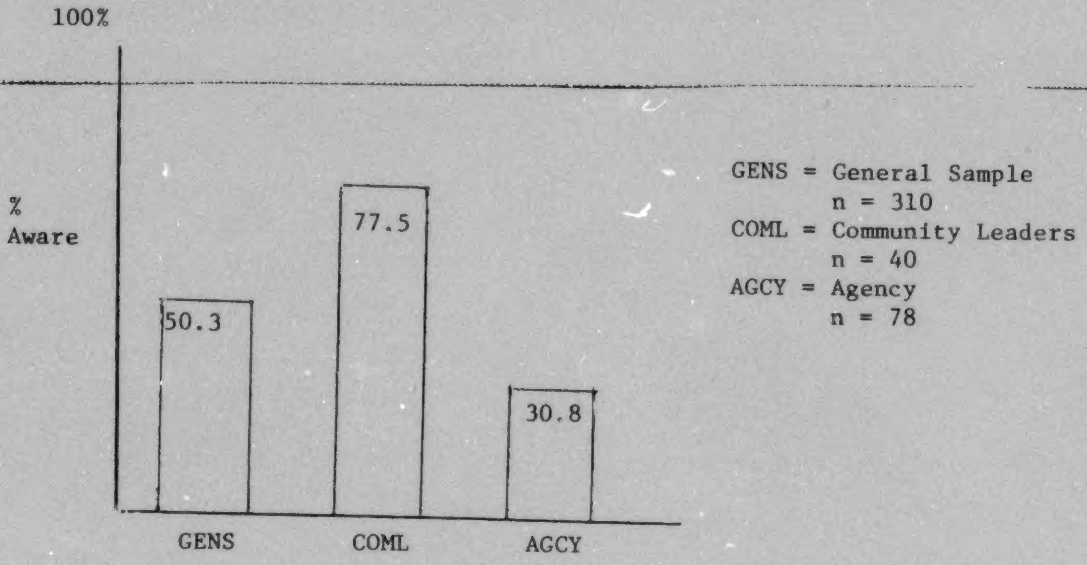
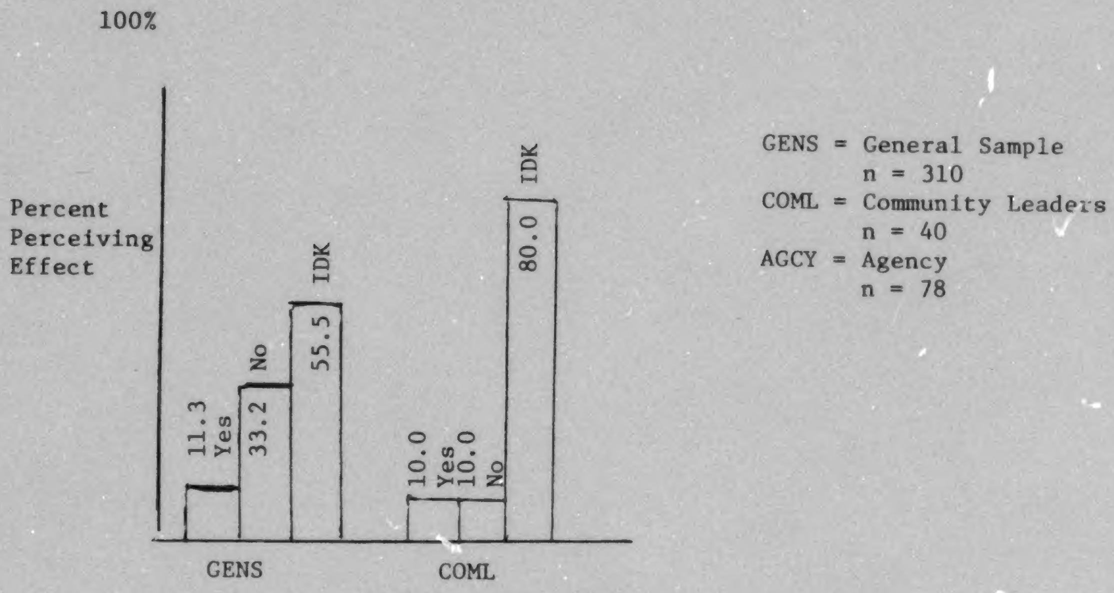


Figure 3: Perceived effect of West River Diversion Project on job (totals for all effects), for general sample, community leader and agency respondents.

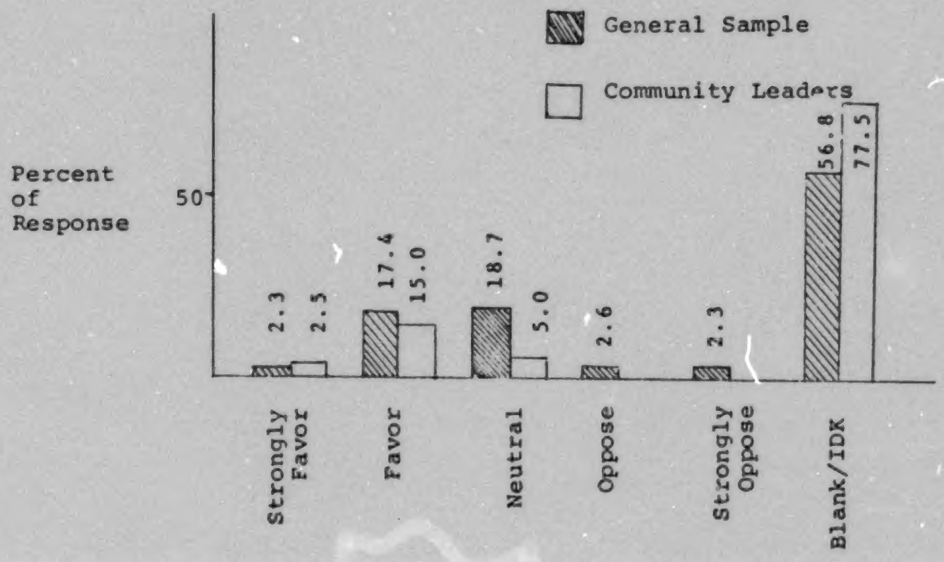


(Unless otherwise noted, sample sizes in all tables are:
GENS = 310; COML = 40; AGCY = 78)

Table 1: Perceived benefits and disadvantages of West River Diversion Project.

Benefits	GENS	COML	AGCY
Water related	11.2	12.5	24.4
Industry/Economy	5.0	--	7.7
Social	0.3	5.0	1.3
Agricultural	3.2	--	--
Other	1.6	2.5	2.6
IDK/Blank	78.4	80.0	64.1
Disadvantages			
Environmental	7.2	2.5	12.8
Economic	3.5	--	20.5
Social	2.3	2.5	8.9
Other	7.7	7.5	2.6
IDK/Blank	79.4	87.5	55.1
N=	310	40	78

Figure 4: Opinions toward West River Diversion Project.



disadvantages, even though a number of serious drawbacks were surfaced in an environmental impact study.

There were some notable differences among the three groups in the kinds of benefits and disadvantages people perceived. Over-all, the perception of water-related benefits was high compared to other types of benefits. Agency respondents were especially conscious of water-related benefits. General sample and agency respondents saw some benefits in economic terms, while leaders did not. Only the general public saw agricultural benefits while disadvantages for them were largely environmental and economic. Leaders were less likely than others to see environmental and economic disadvantages. Agency respondents, on the other hand, were the most likely to specify disadvantages in all specific categories, suggesting that these individuals still have a much broader evaluational framework for development projects than COML's or GENS. Future information efforts should strive to share this framework more widely with citizens.

If the project were to come up now in something like a regional referendum, it would be likely to pass (figure 4). More people favor it than oppose it among both public and leaders. However, what the results show even more clearly is that such a referendum would not be appropriate at this time (unless considerable change has occurred since the survey was made). The majority of people did not have an opinion one way or another, a result that could have been anticipated given our earlier findings for knowledge of consequences (table 1; figure 3). The combined implications of our data are that any decision made now to implement the project would probably be made by a minority of the people - a minority not much more informed than those with no opinion.

In our earlier study on the Park River (Stamm & Bowes, 1972), approval of the project was strongly related to where one lived - people in towns were generally in favor, having much to gain from economic activity and flood control. Rural people, however, were noticeably more opposed as they would suffer the land losses, construction disruption, and scenic depredations of the project with few of its advantages. In spite of the wealth of uncommitted people in the present study (which tends to flatten out trends), data presented in table 2 suggests that the same sort of opinion division may be forming over West River Diversion. Agencies and planners should, then, keep in mind that the opinions they hear may vary strongly by locale.

In our remaining analyses, we tried to locate some possible explanations for opinion (or lack of it) toward the project. First, it seemed likely that opinion toward the project would be influenced by its perceived effect on jobs (table 3). Some connection was found for the general sample. Those who perceived an impact were less likely than others to favor the project and more likely to be neutral. Evidently, those who perceived a job impact were not certain that the impact would be favorable, or they should have been more favorable toward the project.

We also determined whether the kinds of benefits and disadvantages perceived had any connection to opinion toward the project. This analysis proved difficult to interpret because we had to work with a much reduced sample.[2] The influence of particular benefits was not readily discernible, but it does appear that the perception of water-related and/or economic

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[2] Only those who knew benefits and/or disadvantages and who also had an opinion of the project could be included.

Table 2. Approval of West River Diversion Project by incorporated vs. unincorporated place of residence.

Place of Residence	Favor WRDP	Neutral or Oppose*
Unincorporated	41.9	57.5
Incorporated	58.1	42.5
n	(62)	(73)

X^2= 3.35, df=1 sig .085
Kendall's Tau -.1478
Sig. .0052
Gamma -.2674

*Of this group of 73, 58 were neutral, 15 were opposed. Categories were combined to improve stability of statistical testing.

Table 3. Perceived effect of West River Project on job by approval of the project for general sample and community leader respondents.

		Favor Project	Neutral	Oppose Project	n
General Sample (n=128)**	Project will affect job	42.6	48.5	8.5	(94)
	Project will not affect job	52.9	26.5	20.6	(34)
Community Leaders (n=8)**	Project will affect job	75.0	25.0	--	(4)
	Project will not affect job	75.0	25.0	--	(4)

**Only respondents holding an opinion are included in this analysis.

Table 4. Perceived benefits of West River Project by approval of the project for general sample respondents.

Perceived Benefits	Favor Project	Neutral	Oppose Project	n
Water-Related	41.6	48.5	9.9	(101)
Industrial-Economic	56.3	43.8	--	(16)
Social-Quality of Life	100.0	--	--	(1)
Agriculture	70.0	20.0	10.0	(10)
Other, General Comments*	42.9	--	57.1	(7)

*These comments usually had criticism mixed with vague, general discussion of possible benefits.

Table 5. Perceived disadvantages of West River Diversion Project by approval of the project for general sample respondents.

Perceived Disadvantages	Favor Project	Neutral	Oppose Project	n
Environmental Depredations	71.4	14.3	14.3	(7)
Land Loss	14.3	64.3	21.4	(14)
Economic Problems	10.0	80.0	10.0	(10)
Social-Quality of Life	14.3	42.9	42.9	(7)
Other	40.9	40.9	18.2	(22)

benefits was not sufficient for project approval (table 4). Agricultural benefits carried greater influence (among those who perceived them). The trends for perceived disadvantages were much sharper, but are unfortunately based on an even smaller sample. Of the disadvantages listed (table 5), environmental damage was least likely to be associated with opposition to the project. Negative influence on the quality of life (social) was most likely to be associated with opposition. These findings suggest that additional information on quality of life (social), land loss and economic problems would have considerable influence on local opinion. The direction of influence would vary, depending upon the nature of the information and how it was interpreted by local people. The results should not be taken to indicate that environmental disadvantages should be disregarded but neither should they be stressed to the exclusion of other more salient criteria.

Summary

1. Awareness of the West River Diversion Project was far from universal, averaging about 50 per cent for the general sample, 77 per cent for community leaders, and, surprisingly, only about 30 per cent for the agencies. Publicity about the project not only needs to be disseminated outward but also inward in an effort to educate agency staffs on West River developments.
2. Recognition of the West River Project appears to be at a low level - despite moderate awareness rates - given the few numbers among the public and community leadership certain of some project consequences.
3. Compared to agencies, the public and leaders tended to see the project somewhat simplistically in terms of one or so big advantage and/or disadvantage, rather than the complex of benefits and problems such development projects typically entail.

4. A majority of leaders and the public were unable to make a decision for or against the West River Project. Those who were able, tended to favor its implementation. Thus, while better than half the public is aware of the project, most don't understand it enough to come to a decision on its worth. There was a tendency in these results for the public in towns to favor the project more than rural respondents.
5. What relationship there might be between the kinds of benefits perceived for West River Diversion and approval of the project were not clear, except that realization of water-related or economic benefits had little to do with approval. In the same sense, expectation of environmental damage was not associated strongly with opposition to the project.

PRIORITIES AND EVALUATION FOR REGIONAL DEVELOPMENT

From a planner's point of view, the West River Diversion Project is part of a much larger framework of regional development. It is primarily in such a framework, however it is defined, that particular projects can be meaningfully discussed and evaluated. For this reason, we extended our analysis of citizen information beyond the immediate project to describe their concepts of regional development.

Again, we built our description in terms of a number of different ways of thinking about regional development. On the one hand, we listed a number of attributes of regional development and asked individuals to rate the importance they attached to each.[1] This method has the advantage of providing evaluative responses to a presumably exhaustive net of attributes that is common to the three sample groups and thus allows comparison of priorities among groups. The method has the disadvantage of intrusiveness - that is, a tendency to force individuals to respond to the investigators' criteria for evaluating or specifying the experience of regional development. We attempted to minimize this "forcing effect" by allowing people to indicate lack of relevance for any of the attributes.

But more importantly, we combined the above approach with less intrusive ways of observing what people think. In these cases, we asked people to designate what they thought were the important problems of the region. This provided lists of problems that individuals regarded as important enough to mention. We expected that the problems cited would differ considerably between individuals, and thereby show the diversity of problems perceived within the population. This kind of information could tell whether people who supported regional development had similar, or perhaps very dissimilar, reasons for doing so. Perhaps people who opposed regional development would be looking for solutions to very different problems than the supporters. These were some questions we hoped to illuminate.

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[1] The attribute list was determined from pre-testing to find a reasonably exhaustive, minimally redundant set of relevant development characteristics which evolved from free response questions.

After individuals had listed regional problems, we asked them to place them in order of priority. We wanted to know what they thought should be done right away, and what they thought could be postponed a while. This is not the same thing as ranking the importance of problems - e.g., the most important problem may have to be put off because it is not yet feasible. The sequence of development events is important in its own right, and offers many options. Thus, we wanted to describe this aspect of thinking separately from evaluative considerations.

In some cases, we directed our questions to specific points of regional development that appeared to be of special concern to citizens and planners. One of these water management problems was of particular concern because the use and allocation of scarce water resources is critical to both agricultural and industrial economies. We also emphasized problems associated with mining development. Here we were interested in the effects of mining which people anticipated for their style of life.

These descriptions of how individuals conceptualize regional development should tell us much about what changes are desired and which aren't. And perhaps more importantly, they may tell us what information people need to enable better participation in future regional development decisions.

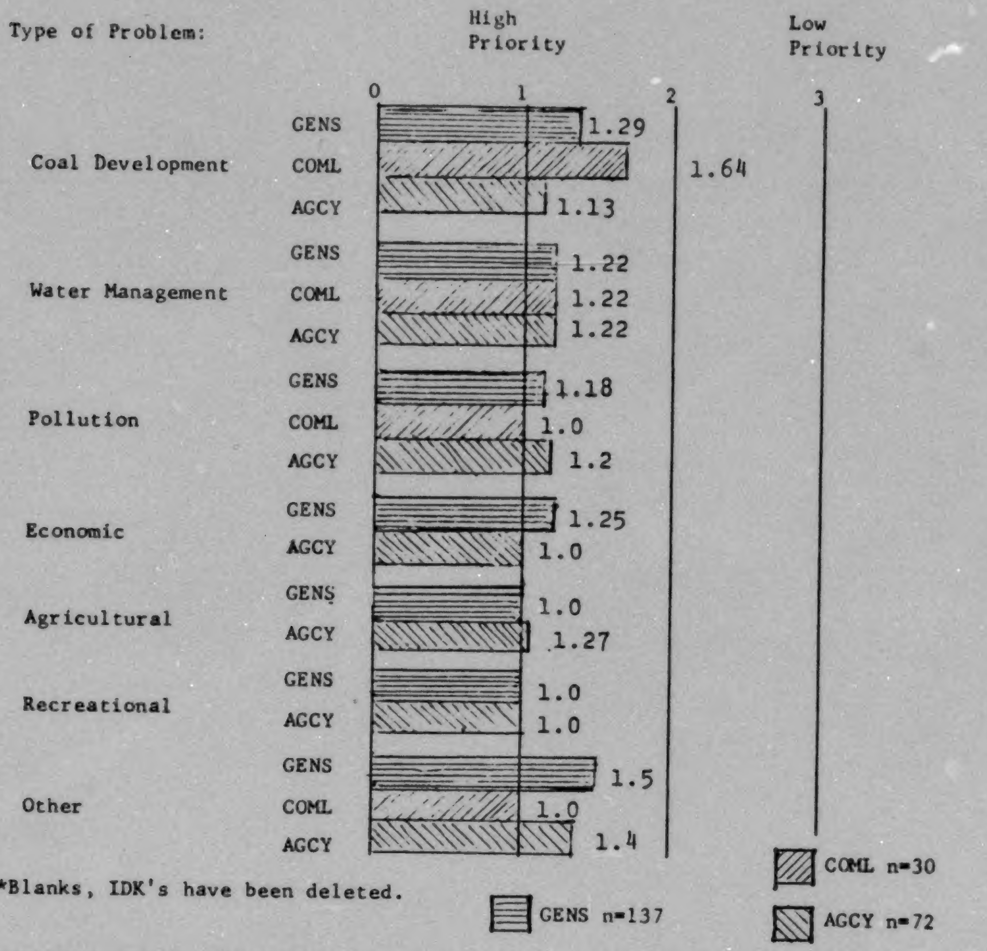
When asked to identify problems facing the West River area, respondents in all three groups most frequently listed problems classified as "coal development", "water management" and "pollution". Other types of difficulties were mentioned much less frequently with the exception of agricultural problems, which were frequently cited by agency respondents (see table 6).

There were also some differences among the three groups in the frequency of problems mentioned. Community leaders listed coal development nearly twice as often as the other two groups - 53 per cent of the time. General sample respondents mentioned water management problems more often than the other groups did. Pollution was listed equally often by all three groups. Over-all, there was a high degree of overlap among the three groups in the problems seen, but the differences also suggest more than one way of viewing the region's development.

The data in figure 5 show that problems which were most often mentioned were not necessarily assigned the highest priority. Thus, the familiar problems are not always perceived as being the most urgent. Coal development, for example, received the most frequent mentions over-all, but relative to other problems, it received lowest priority from both the public and leaders. Interestingly, coal development was also the only problem for which there were any great differences in priorities between groups. Agency respondents gave it by far the highest priority, followed by GENS and then COML. Such results indicate that agencies find themselves pressing for a priority which the public and leaders do not share; agencies share cognizance of the problem, but not of the priority.

When it came to attributes of regional development that we had listed, the importance assigned to them varied considerably (see figure 6). Highest importance was assigned to "consulting citizens", "increasing agricultural productivity", "creating jobs", and "improving health care". Lowest importance

Figure 5. Priority assigned to problems facing West River Region.*



*Blanks, IDK's have been deleted.

Table 6. Per cent mention of problems facing West River Area.

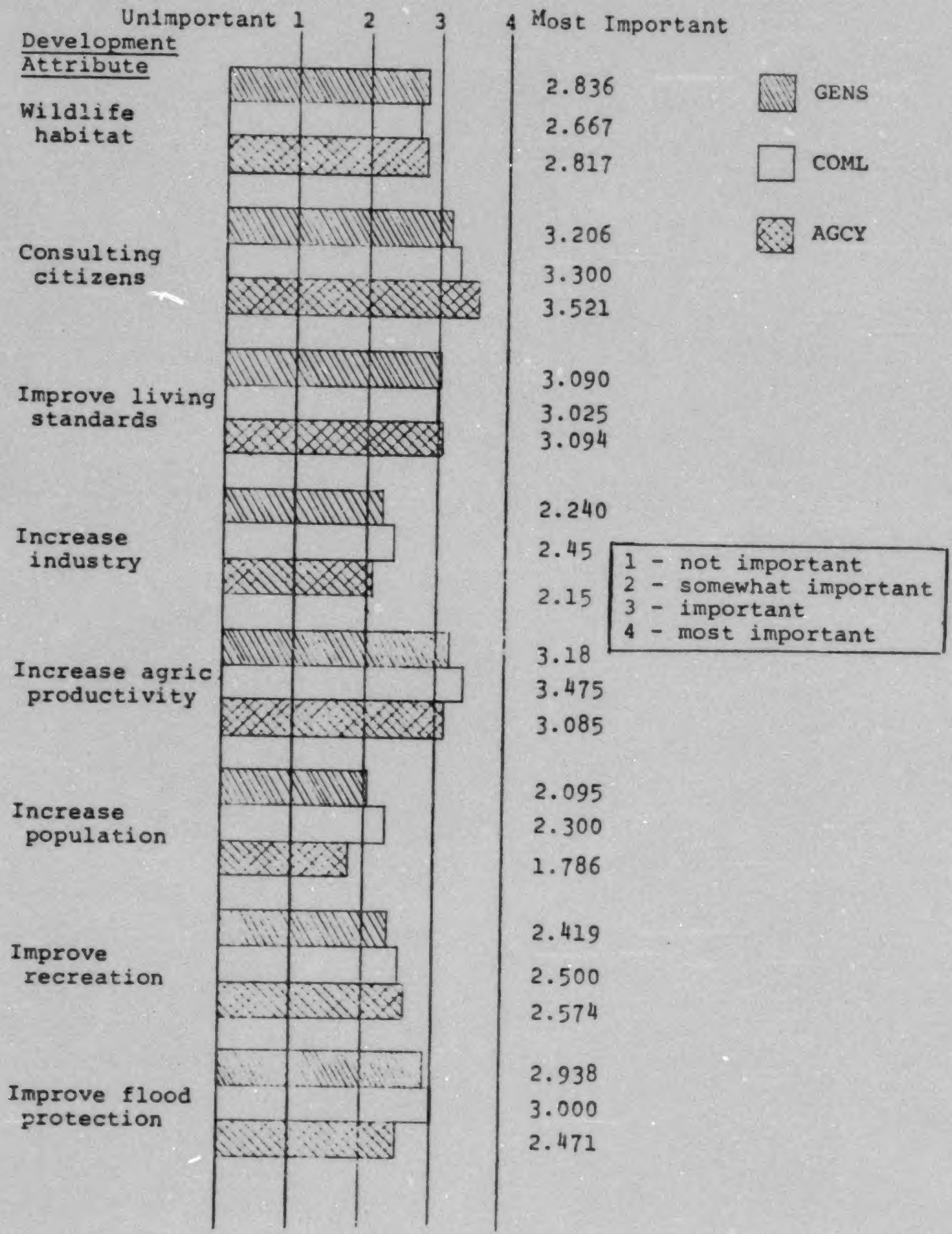
Type of Problem	GENS	COML	AGCY
Coal Development	16.0	47.5	32.2
Water Resources	24.7	22.5	11.5
Pollution	5.4	10.0	12.8
Economic	2.5	-	7.7
Agricultural	1.2	-	20.6
Recreational/Wildlife	0.3	-	3.8
Other	2.6	2.5	6.5
IDK/Blank	46.8	17.5	5.1
n =	310	40	78

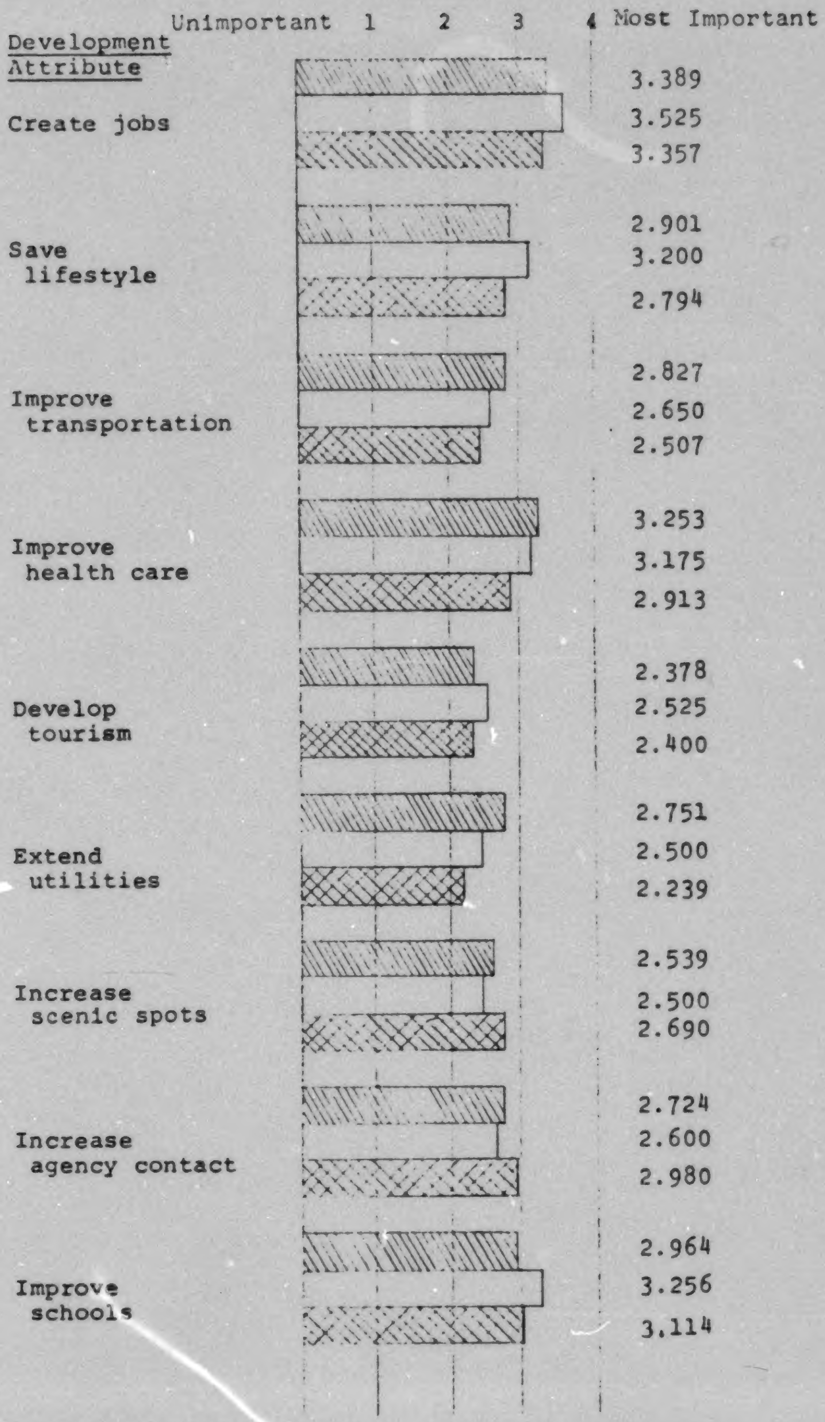
(i.e., "somewhat important") went to "increasing industry", and to "increasing population". All other attributes were rated as "important", so that the net result was that the average rating of all development attributes was near the high and of the importance scale. This bias toward the "important" and of the scale is probably best regarded as representing the intrusiveness of our methods, at least in part. This means that we can reach conclusions about the relative importance of the various attributes, but it would be extremely hazardous to make inferences about the absolute importance of individual attributes.

Of greatest interest to us were comparisons among GENS, COML and AGCY on the relative importance of these attributes. We have already seen some interesting differences among these groups in the types of problems perceived, and in the level of priority assigned to resolving these problems. Differences in importance ratings for these attributes would signal potential difficulty in agreeing upon the facets of regional development to be given greatest emphasis. The results shown in figure 6 indicate that whatever differences do exist could not be described very well as between-group differences using a GENS, COML, AGCY breakdown. The differences which did occur were not very large, although they did pervade across a number of the attributes. The most prevalent pattern was for the COML group to assign greater importance to development attributes than either GENS or AGCY groups. But far more striking than these differences was the similarity among the three groups in the importance ratings across all 17 development attributes, suggesting that any potential for disagreement that may exist is not readily described as a between group difference along these lines. These three groups appear to have a lot in common, when described in such terms.

Our first set of questions on regional development tapped three specific issues: (1) water management priorities; (2) coal development; and (3) the

Figure 6: Average level of importance attached to attributes of regional development for general sample, community leader and agency groups.





Unimportant
1
2
3
4
Most Important
Development Attribute
Create jobs
3.389
3.525
3.357
Save lifestyle
2.901
3.200
2.794
Improve transportation
2.827
2.650
2.507
Improve health care
3.253
3.175
2.913
Develop tourism
2.378
2.525
2.400
Extend utilities
2.751
2.500
2.239
Increase scenic spots
2.539
2.500
2.690
Increase agency contact
2.724
2.600
2.980
Improve schools
2.964
3.256
3.114

Garrison Diversion Project. Over-all, the results of these questions showed that:

(1) Water supply and runoff control have higher priority as water management priorities than development of recreation areas (table 6a);

(2) More people see coal development as "mostly an advantage" than see it as "mostly a disadvantage" (table 7);

(3) Coal development is expected to have some bad effects on air and water quality (table 8);

(4) Most people don't anticipate that coal development will result in a job change for them (table 9);

However, by further analysis we were able to show that expectations of unfavorable effects from coal development were strongly associated with general opinion of coal development (figure 7). The more negative the effect expected upon water quality, air quality, water use, and travel, the stronger the disapproval of coal development. Unfortunately, we cannot conclude from this evidence that expectations of negative effects are necessarily causing unfavorable opinion - we've simply observed that the two are strongly associated. Given these limitations upon our inferences, it still seems reasonable to suggest that these negative effects are important considerations for area citizens. Agencies and firms responsible for development should insure adequate discussion of these points with the public and leaders.

(5) Opinion on the Garrison Diversion Project was very mixed. The number of people with "no opinion" or insufficient knowledge of the project far exceeded those with a clear-cut opinion. Some specific reasons for opposition did surface fairly often - "bad effects on the land", and cost (table 10).

Table 6a. Average perceived need for Three Water Management Priorities.

	GENS	COML
Improved water supply	2.84	3.18
More recreation areas	2.37	2.60
Runoff control	2.78	3.08

1 = Great Need
5 = No Need

Table 7. Perceived need for coal development in per cent.

	GENS	COML
Mostly advantage	48.4	65.0
Mostly disadvantage	38.1	32.5
IDK/Blank	13.5	2.5

Table 8. Some perceived effects of coal development. Values are mean optimism ratings.

Effects On:	GENS	COML
Water quality	2.39	2.43
Air quality	1.96	2.00
Water use	2.58	2.44
Area travel	2.76	3.18

1 = Changes make area much worse
2 = Changes make area slightly worse
3 = Development changes have no effect
4 = Changes improve the area

Table 9. Perceived effects of coal development on job choice in per cent.

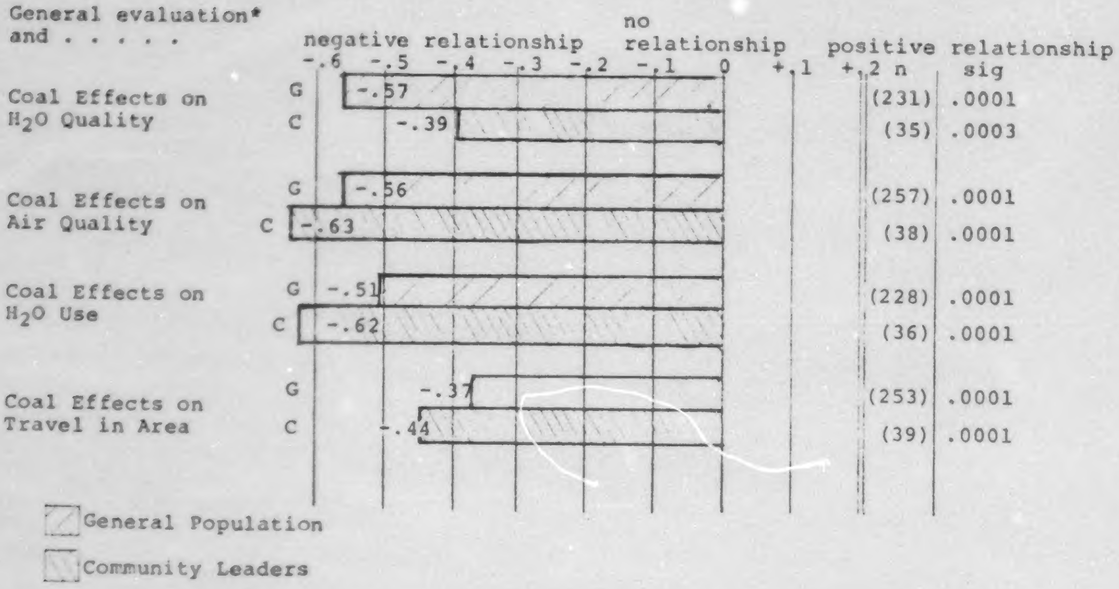
	GENS
Stay with job	87.4
Change jobs	6.1
IDK/Blank	6.5

Table 10. Opinion on the Garrison Diversion Project in per cent.

Opinion	GENS	COML
General opposition	8.4	5.0
Bad effects on land	4.2	7.5
Not needed - too costly	3.2	10.0
General opposition with some praise	2.2	2.5
Neutral	5.4	-
Favor	16.1	40.0
Good - general approval	3.5	2.5
Other	22.1*	2.5
IDK/Blank	34.5	30.0

*20.3 per cent "no opinion"

Figure 7. Coefficients of relationship (Kendall's Tau) between perceived environmental effects of coal development and general rating of coal development as advantage or disadvantage for the West River region. Data for general population and community leader sample groups.



*all relationships indicate increased negative coal effects on environment as a function of increased general disapproval for coal development

Within these general trends, a number of differences were found among GENS and COML respondents. Community leaders perceived greater need for all three water management priorities than did the general sample group. They were more likely than GENS to see coal development as an advantage, and less likely to be undecided about coal development. There was not much difference among the public and agencies in perceived effects of coal development, except that leaders expect a more beneficial effect on area transportation systems. Differences between the public and leaders in opinion on Garrison Diversion were very strong. A far greater proportion of COML's had a favorable opinion of the project, and substantially fewer expressed no opinion at all. Given these differences, it is reasonable to expect that the COML group would be more favorably disposed to current regional development ideas.

Summary

1. In a free response setting, the most frequently mentioned problems facing the West River region were coal development, water management and pollution problems. Agency people placed strong emphasis on agricultural problems as well. Generally, there was high agreement among the three groups on major problems.
2. Priorities assigned to solving problems varied somewhat, with the oft-mentioned coal problems receiving lower priorities than most others listed. Coal problem priorities also brought the most disagreement among the three sample groups, with agencies viewing these problems as considerably more urgent than community leaders and somewhat more urgent than the public. These discrepancies may suggest future problems in unifying community effort to discuss and deal with coal problems.

3. The importance assigned to entries on a list of regional development needs (attributes) was greatest for the need to consult citizens on development, agricultural productivity, more jobs and better health care. Of low importance were some of the likely means to bring about high importance items, such as more industry (for more jobs) and increasing population (tax base for better health care). All involved in the development process should become better aware of the inconsistencies in demands made, so that workable compromises can be reached. The three sample groups were quite similar in their assessment of 18 development needs.

4. A majority of people see coal development as mostly advantageous, though many expect bad effects on air and water quality and no major effect on their jobs. Those expecting quite harmful consequences to the environment, water use and travel, of course, tended to be unfavorable toward the project.

CITIZEN EVALUATIONS OF DEVELOPMENT AGENCIES

Our approach to describing citizen evaluation of agencies is much like our approach to describing how people think about the project. We are not simply conducting a popularity poll to see which agencies come off with the best "image". As comforting as it may be to receive positive evaluations from citizens, agencies cannot regard such support as a mandate to pursue development policies without restraint or careful consideration of citizen views. Citizen evaluations indicate approval of the past performance of an agency, but may indicate nothing about approval of future performance.

For these reasons, rather than simply measuring over-all evaluations of development agencies, we attempted to get some indication of how people perceive the agency beyond simple "good" vs. "bad" distinctions. Central to this idea, was to gauge the extent to which people stereotype agencies, an important process that requires some elaboration.

The term "stereotype" connotes a number of common images - being insensitive to differences in qualities possessed by someone or something, grouping all things under a common, and perhaps inadequate description, seeing things in extremes, being reluctant to change one's attitudes to fit changing realities and so on. If we can capably measure the extent to which stereotyping occurs, we perhaps can develop better explanations of why agencies are evaluated as they are. For example, we might conclude that evaluative judgment that an agency is "bad" might not be well thought out if much of the group making that decision shows a tendency to see agencies in extremes, not accounting for the unique qualities each might possess.

Stereotyping, unfortunately, is a complex concept; one which holds different meanings for different people. To reduce this ambiguity in its use, social scientists have evolved several components of stereotyping which have more precise meanings.[1]

1. Reification: This term means that one tends to assign all agencies (or whatever) to a particular description - e.g., all agencies are very wasteful, dishonest, helpful and so on. Initially, we attempted to measure this concept for the five agencies involved in our study. However, our pre-tests showed that nearly all individuals reified agencies - seeing them as all part of the same government-bureaucratic fabric. In short, we had a variable - reification - which didn't vary and it was dropped from the study.

2. Homogeneity: An individual who perceives an agency homogeneously assigns all descriptions to the agency to the same degree. In other words, the agency is seen as somewhat dishonest, somewhat helpful, somewhat wasteful and so on. Descriptions collectively may be applied to any degree, the key is that they are all at the same degree.

3. Polarization: The polarized individual sees agencies at extremes; e.g., agencies are mostly or always dishonest; wasteful, helpful, etc. The astute logician will recognize that completely polarized images are also completely homogenous, but aside from this extreme case, the two concepts show marked conceptual and, in most applications, statistical independence.

4. Fixedness: This term implies that the image remains static over long periods of time. Because our study was administered at only one time point, we are presently unable to evaluate this concept. Re-surveying of our respondents after an appropriate time interval will yield these data.

Our success, then, as described above in measuring components of stereotyping was limited to homogenization and polarization. We hold the hope that these variables which tap the composition of agency images rather than a summary good vs. bad evaluation may be a more powerful descriptor of how people view agencies.

Evaluations were also sought in terms of specific facts of an agency's past performance. If an agency was evaluated unfavorably, we wanted to be able to identify some characteristics of past performance that could have contributed to that evaluation. Was it performance on a particular project? Was the agency perceived as willing to listen, and to communicate about policy?

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[1] A more detailed explanation of the conceptual and research background underlying these components is given in: Bowes and Stamm (1974). "Coorientational Accuracy During Regional Development of Energy Resources: Problems in Agency-Public Communication." Paper presented to The AEJ, San Diego, CA.

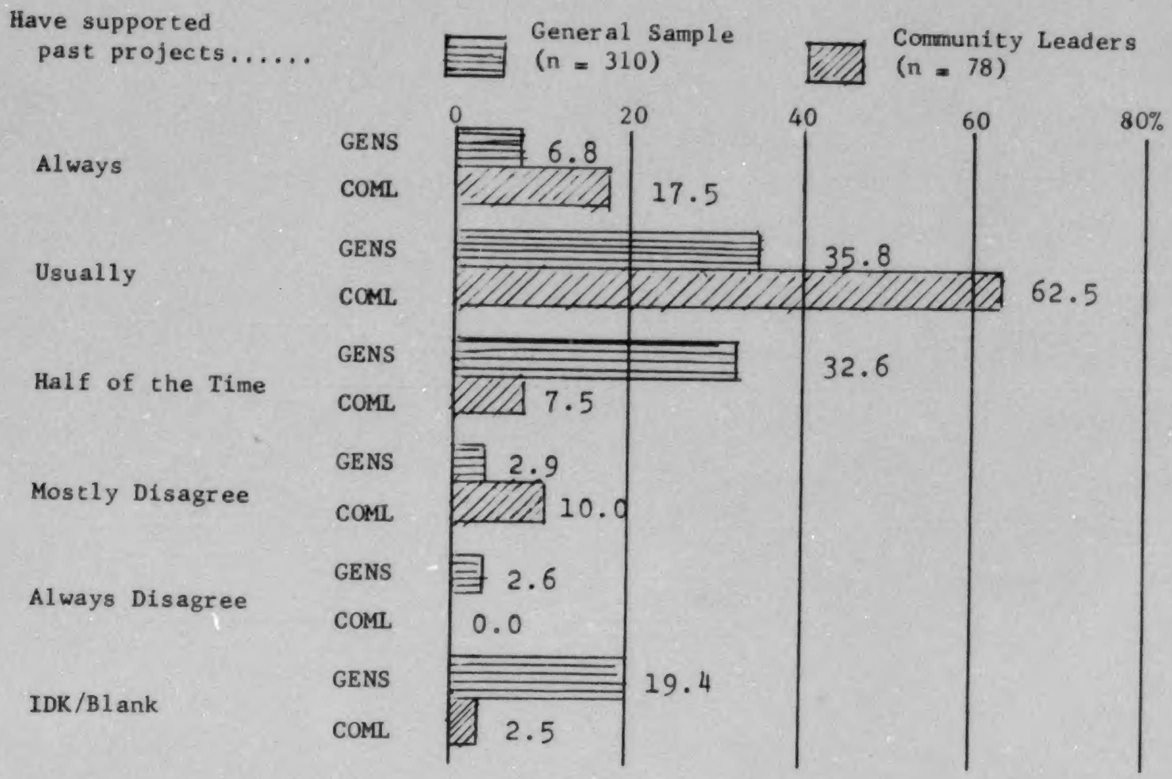
For the most part, the image of development agencies portrayed by the respondents was a favorable one, but with some interesting variations depending upon the descriptive criteria and upon who was providing the rating. Over-all, support for and evaluation of agency past performance and projects is high (see figures 8 and 9). The worst marks against development agencies were their "ignorance of local needs" and "waste of money and time". Otherwise, agencies were described as helpful, honest, dependable, available for advice and information, and fair (see figure 10).

In most cases, no group gave more critical descriptions of government agencies than the agency people themselves. They were more conscious than either GENS or COML of the ignorance of local needs, lack of honesty, fairness and dependability, unavailability for advice and information, and wastefulness. In fact, there was not a single criterion on which AGCY respondents described themselves more favorably than did GENS or COML.

With few exceptions, the agency image described by GENS and by COML was similar. COML's perceived agencies as more often helpful, and as more often fair in dealing with disputes and land payments.

The structure of agency images was found to be moderately homogeneous across all three groups, but considerable structural differences were found in the degree of polarization (figure 10.1). The images held by COML's were the most polarized - primarily because they consistently perceived agencies in more positive terms than either GENS or AGCY members themselves. AGCY members had the least polarized images for agencies, reflecting their ability to see both

Figure 8 Past support for agency projects by general sample and community leader respondents.



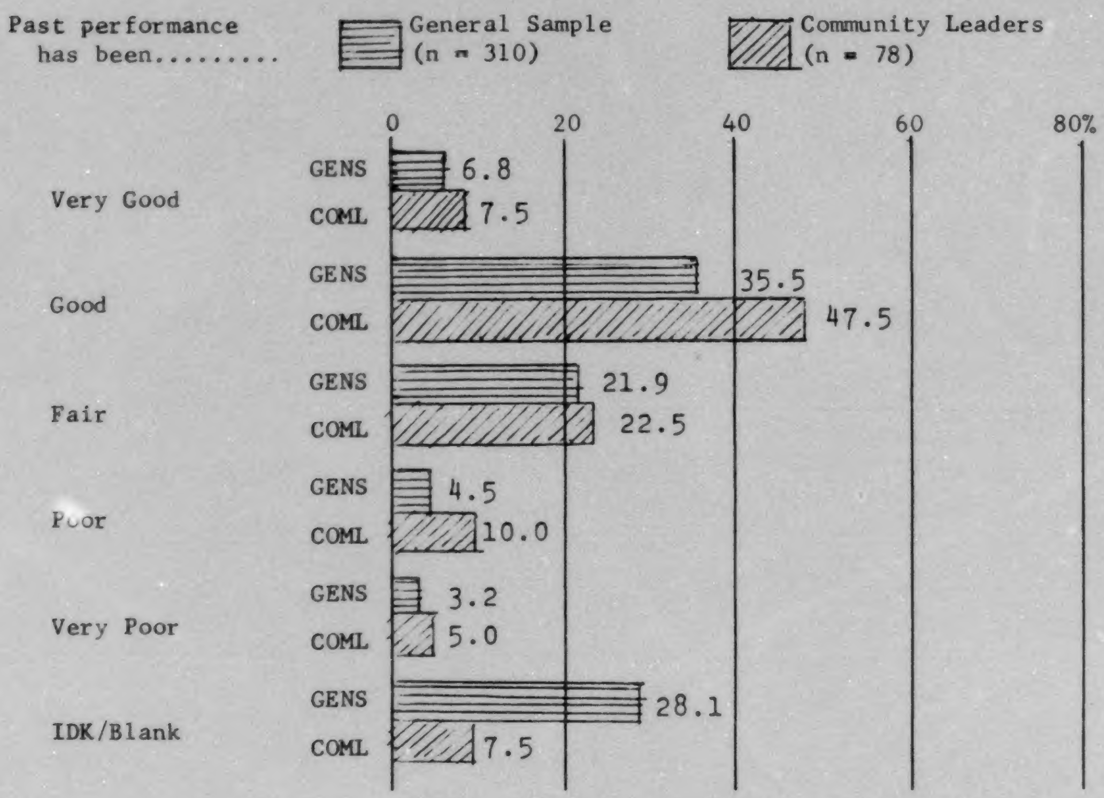
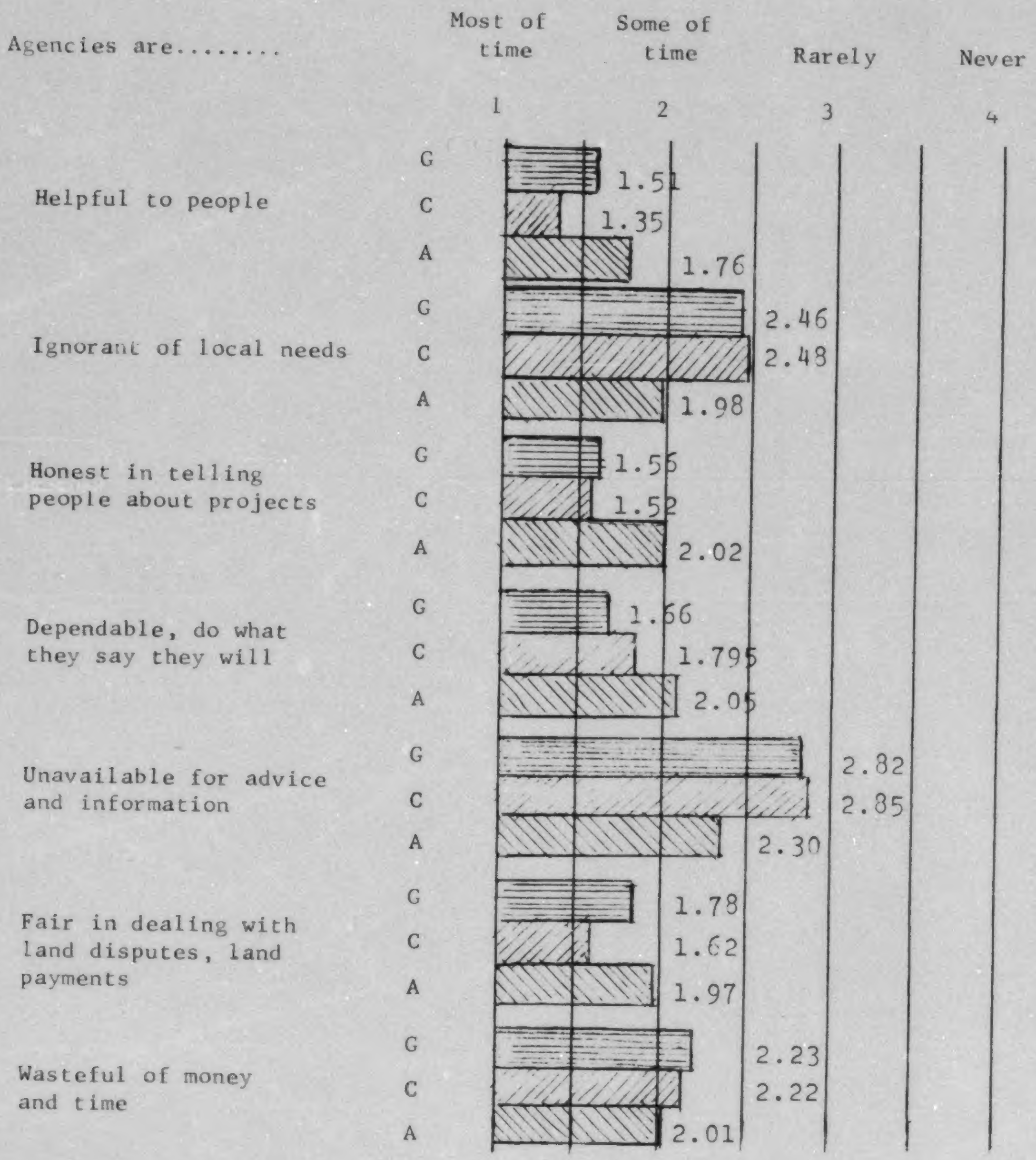


Figure 9. Evaluation of agency past performance for community leaders and general sample respondents.

Figure 10. Mean response rating on seven attributes of agency performance for GENS, COML and AGCY samples.



G = General Sample

C = Community Leaders

A = Agency

the good and the bad points of agencies in a more flexible manner. The strong polarization in COML images, with its favorable leaning, suggests that COML leaders are more often exposed to the "good side" of agency activities.

The balance of our concern was to try to go beyond images, and determine how local people evaluated performance of development agencies - particularly their effectiveness in communicating with the public. A strong, consistent pattern was found in which COML evaluated agencies the most favorably and were more often at the receiving end of agency communication efforts.

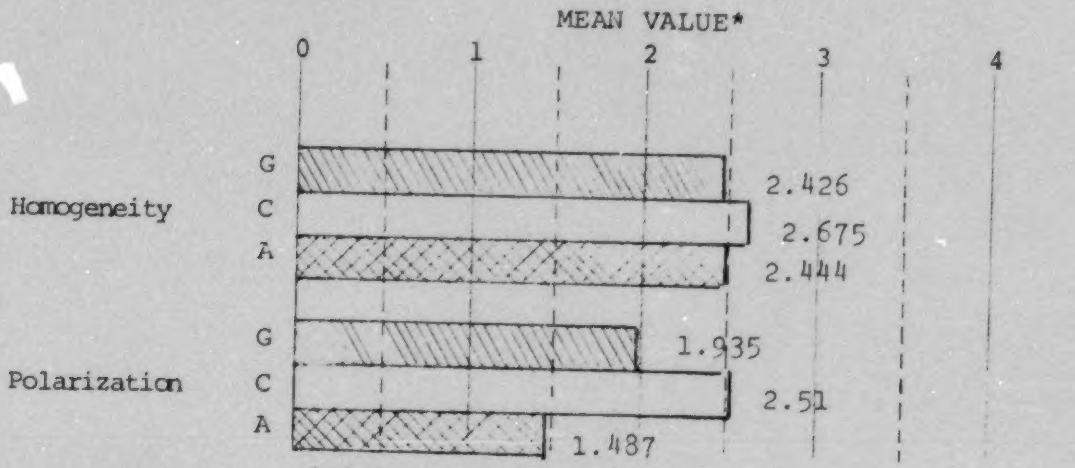
First, COML's perceived agencies to be more responsive to public opinion (figure 10.2) than either GENS or AGCY members. When asked to list agencies that "don't listen" to public opinion (table 11), COML's could list more agencies than GENS, but not nearly as many as AGCY members. Predictably, federal and state agencies were mentioned as "not listening" much more often than local and county agencies.

Likewise, in rating the quality of agency information (figure 11), COML's who answered the item (62 per cent did not) gave a satisfactory rating. AGCY members, on the other hand, gave very mixed ratings - an even split between "doing a good job" and "doing a fair job" (figure 12).

At the same time that COML's were found to evaluate agency communication more favorably, they were also found to have greater contact with agencies than the general public. The results showed COML's being less likely to have infrequent contact (less than six times a year) and far more likely to have frequent contact (more than 12 times per year) (figure 13).

The same pattern of favorable evaluation was repeated for agency performance in handling land acquisitions involving condemnation and compensation procedures. Community leaders were more likely to rate agencies as being "very fair", while

Figure 10.1 Mean homogenization and polarization of attributes describing development agencies by GENS (G), COML(C) and AGCY (A) sample groups.



*Higher values indicate LESS homogenization, but MORE polarization.

Figure 10.2 Mean responsiveness rating of agencies to public opinion by GENS (G), COML (C) and AGCY (A) sample groups.

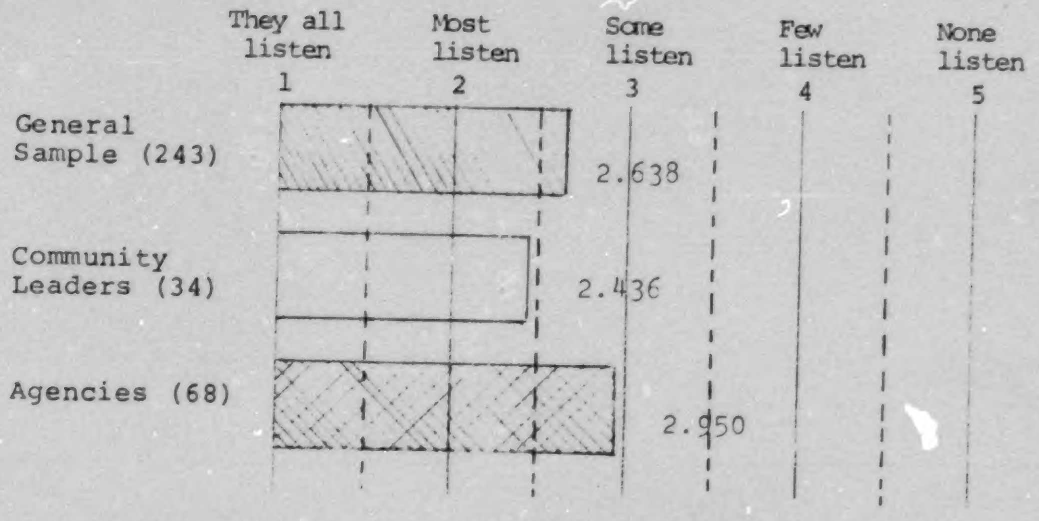


Table 11. Listing of agencies "which don't listen" to public opinion by general population, community leader and agency samples.

	GENS	COML	AGCY
State Agencies	0.9%	7.5%	9.0%
Local, County Agencies	1.2	2.5	2.6
Federal Agencies	3.4	10.0	45.0
Private Firms	0.3	-	-
Agencies in General	0.6	2.5	-
Environmental Groups	0.3	2.5	-
Other (uncodable)	1.9	2.5	2.6
No answer given	91.0%	72.5%	42.3%
(n)	(310)	(40)	(78)

Figure 11 Rating of agency information quality by community leaders.

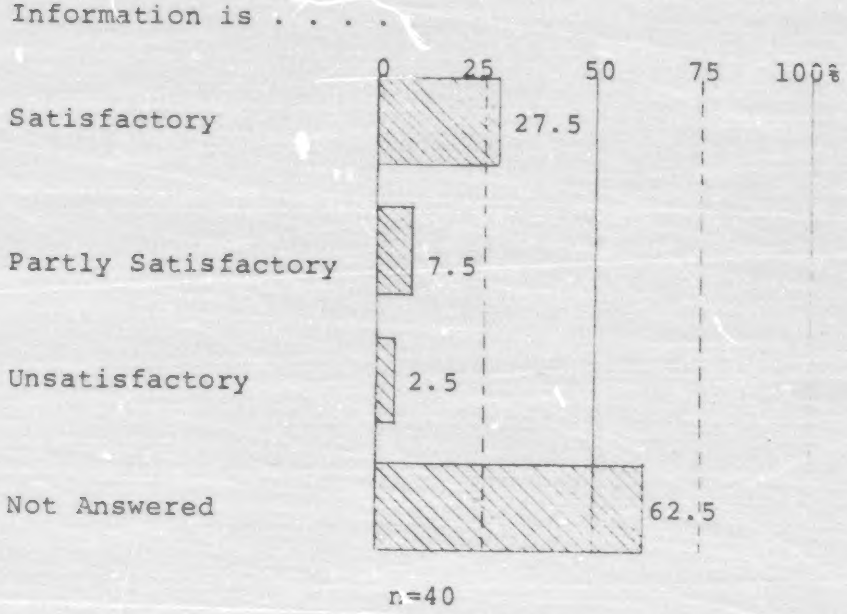


Figure 12 Self-rating of own agency's public relations/information efforts for the public. Agency personnel (n=40)

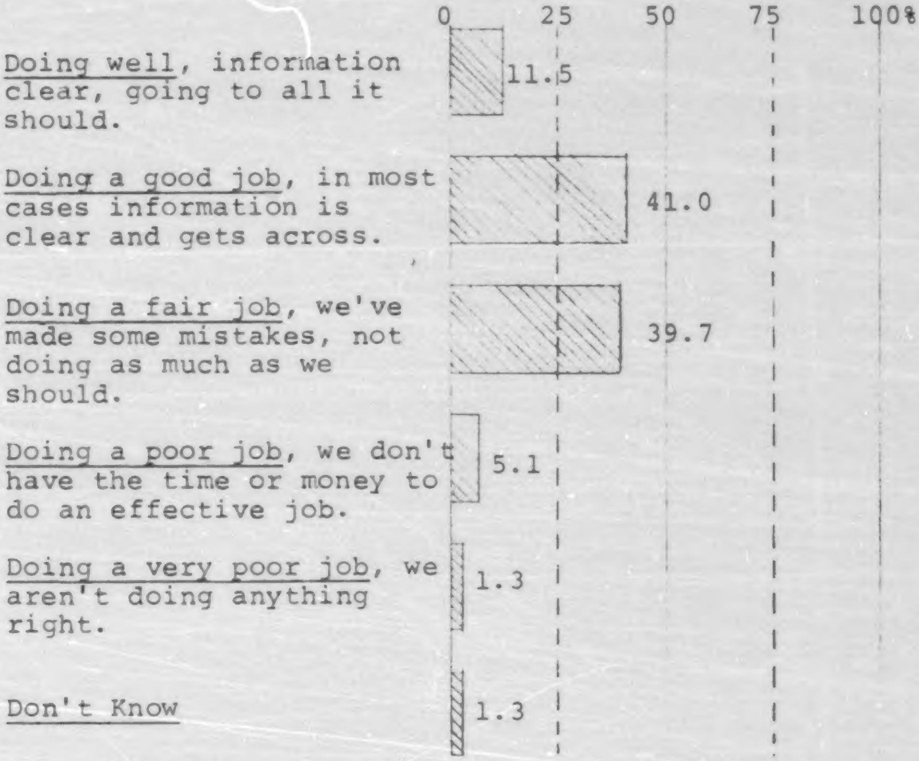
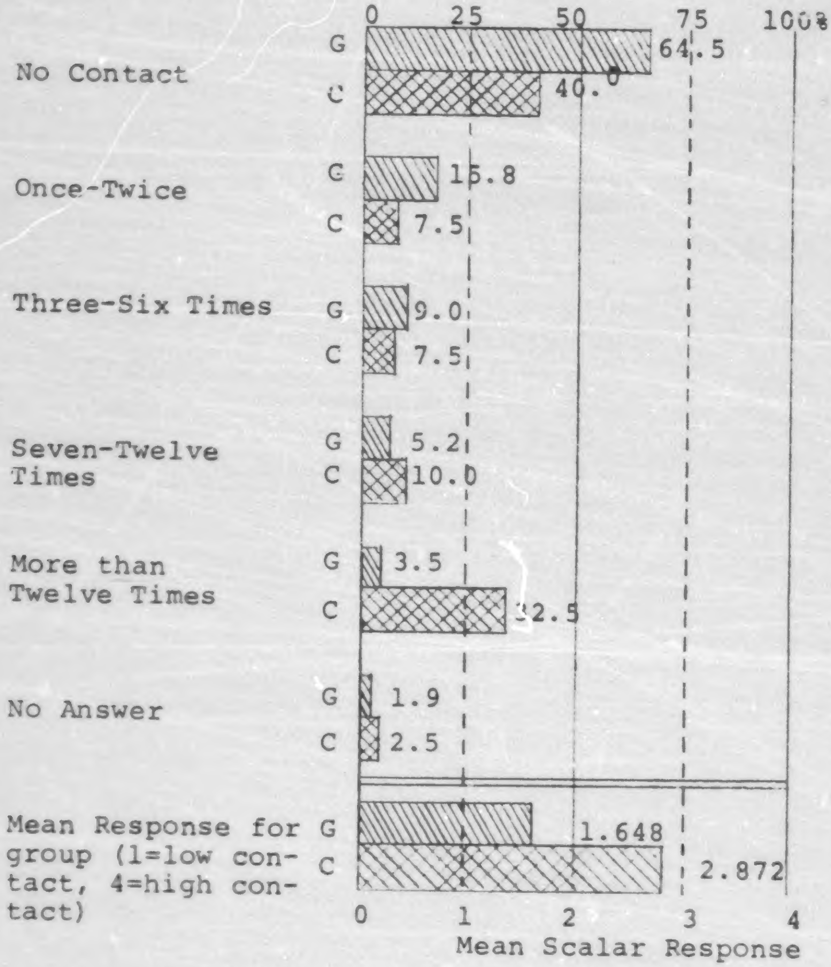


Figure 13 Showing contact with agency representatives (Soil Conservation Service, State Water Commission and Bureau of Reclamation) during past year for GENS and COML groups.



G-General Sample (GENS)
C=Community Leaders (COML)

AGCY members were the most likely to assign an "unfair" rating to such procedures (figure 14).

Having described the image of development agencies, we turned to two questions which naturally arise. Can other characteristics among our sample groups account for differences in agency image? And, do differences in agency image have consequences for the support (or damnation) that development agencies receive First, we can show that support for agency past projects is associated with the agency image held. Stronger support for past projects generally meant a more favorable image for development agencies (figure 15). Most of the image attributes - ranging from agency helpfulness to wastefulness were significantly related to past project support. There were some differences between leaders and the public in terms of attributes most strongly related to past support. Leaders were more sensitive to agency helpfulness to people and wastefulness of time and money. The public was far more sensitive than leaders to agency fairness in settling land disputes, in their ability to keep promises and their lack of availability for advice and information. As in similar comparisons earlier in this report, the results suggest caution in viewing leaders' opinions as representative of the population.

The relationships of water project ratings with image attributes produces results similar to those just discussed (figure 16). Several differences, however, are noteworthy. Leaders were especially sensitive to agencies' ignorance of local needs, indicating that what soured many leaders on water projects was the lack of local involvement and grassroots planning. They were also more sensitive to agency helpfulness to residents. Evaluation of past water projects was also associated with support for current water management projects. (table 11a). But contrary to the strong associations yielded by image attributes with support for agency, this over-all evaluation evidenced only

Figure 14 Fairness rating of agency land acquisition, condemnation and compensation for GENS, COML and AGCY groups.

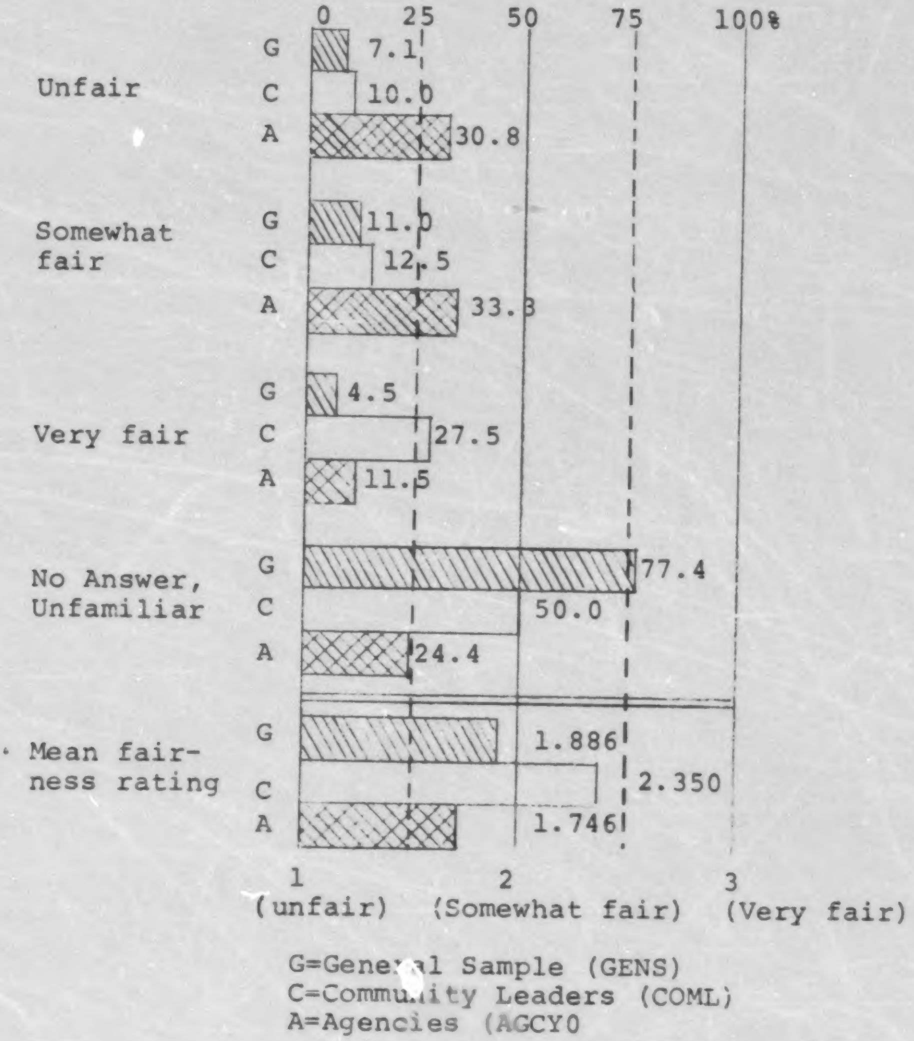


Figure 15. Coefficients of relationship (Kendall's Tau) between support for agencies' past water projects and rating of agencies on several characteristics. Data for General population and Community Leader samples. G=General Population; C=Community Leaders.

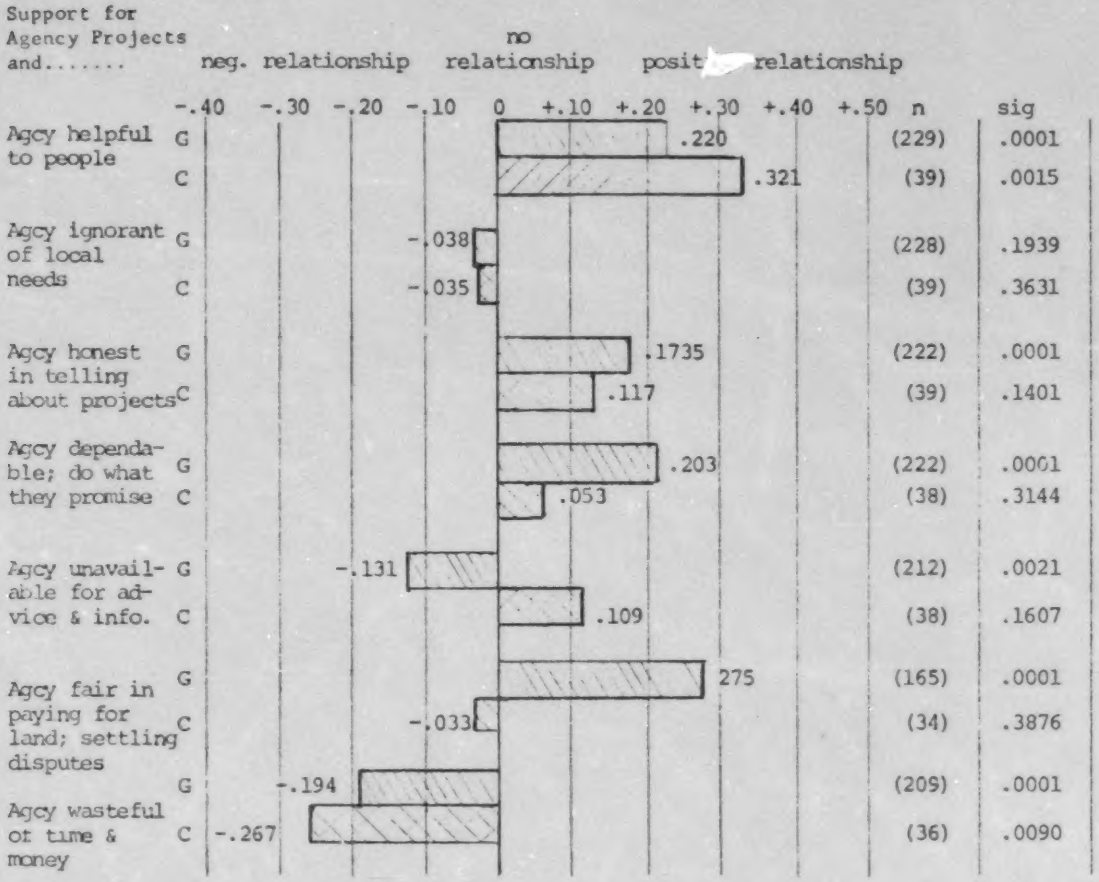


Figure 16. Coefficients of relationship (Kendall's Tau) between rating of agencies on several characteristics and rating of agency water projects. Data for general population and community leader samples. G=general population; C=community leaders

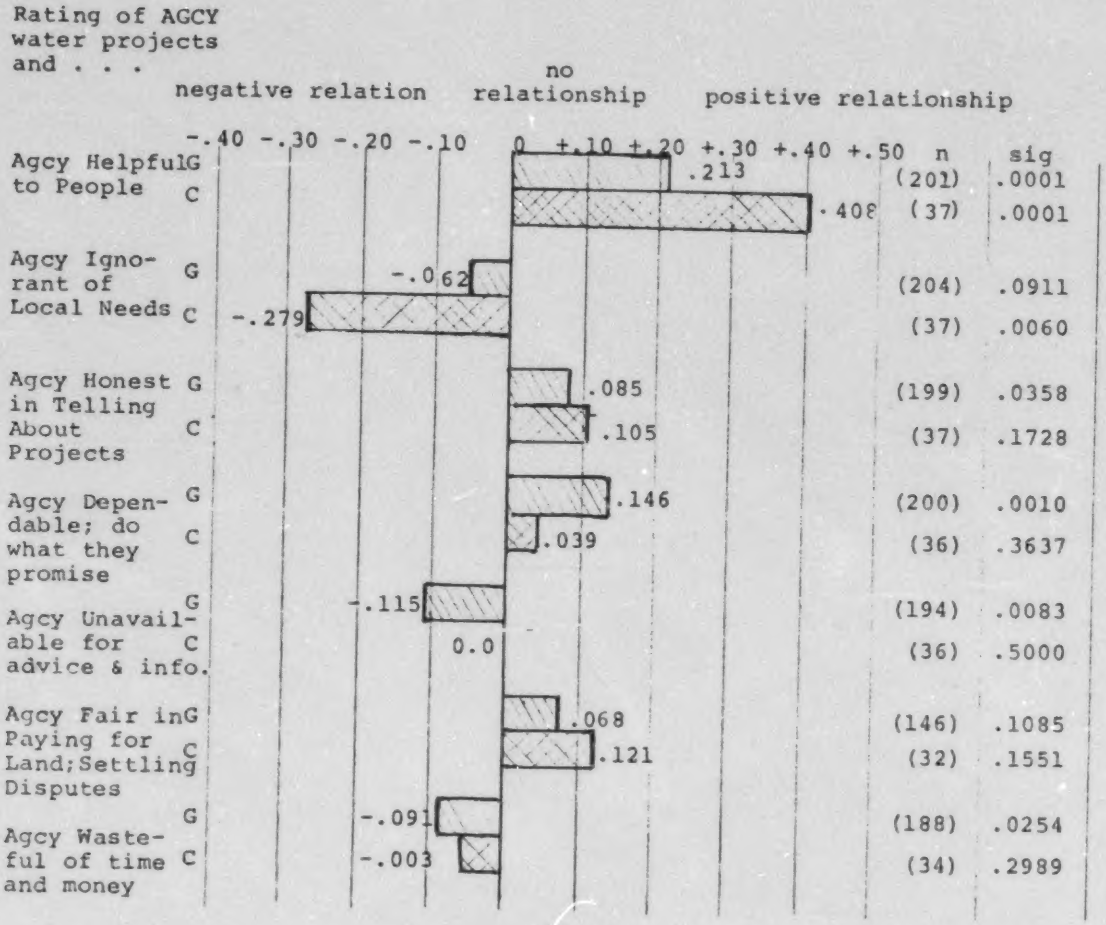


Table 11a. Evaluation of agency past water projects by support for present water projects.

Evaluation of H_2O Projects	GENS Support Level			COML Support Level		
	Support	Support-Disagree	Disagree	Support	Support-Disagree	Disagree
Good	68.9	58.3	16.7	66.7	33.3	25.0
Fair	26.4	29.2	58.3	20.0	66.7	25.0
Poor	4.7	12.5	25.0	13.3	-	50.0
n	(106)	(72)	(12)	(30)	(3)	(4)
	X^2=15.29, df=4, Sig. .004 Gamma .3711			X^2=7.30, df=4, Sig. .121 Gamma .555		

Table 12. Contact with agency representatives by evaluation of agencies' water management projects.

Contact Agency	GENS Evaluation			COML Evaluation		
	Good	Fair	Poor	Good	Fair	Poor
Infrequent	75.6	78.8	82.6	53.2	44.4	50.0
Some Contact	19.1	18.2	17.4	4.8	22.2	50.0
Frequent	5.3	3.0	-	42.9	33.3	-
n	(131)	(66)	(23)	(21)	(9)	(6)
	X^2=1.82, df=4 Sig. 76 Gamma -.132			X^2=8.60, df=4 Sig. 072 Gamma -.148		

Table 13. Contact with agency representative by incorporated vs. unincorporated place of residence. Date for general population respondents only.

Place of Residence	Contact with representative is...... Infrequent	Some Contact	Frequent
Unincorporated	42.6%	77.3%	72.7%
Incorporated	57.4	22.7	27.3
n	(249)	(44)	(11)

X^2=20.66, df=2, Sig. .0001
Kendall's Tau= -.254, Sig. .001
Gamma -.6087

Table 14. Familiarity with agency programs by incorporated vs. unincorporated place of residence

Place of Residence	Familiar with Agency Programs...... No	Yes
Unincorporated	44.4%	59.8%
Incorporated	55.6	40.2
n	(216)	(87)

X^2=5.232, df=1
Sig. .0222
Kendall's Tau -.138
Sig. 0002
Gamma -.30

Table 15. Rating of agency fairness in paying for condemned land by incorporated vs. unincorporated place of residence. Data for general population respondents only.

Place of Residence	Agency is...... Unfair	Somewhat Fair	Very Fair
Unincorporated	54.5%	50.0%	31.5%
Incorporated	45.5	50.0	68.8
n	(22)	(34)	(16)

X^2=2.216, df=2, Sig. .3301
Kendall's Tau= -.1495, Sig. .0296
Gamma .2632

weak associations and was of marginal use in explaining why people thought of agencies as they did. Amount of contact with agencies (table 12) also had little to do with support for agency projects. These findings suggest that future attempts, rather than focusing on blanket evaluation and contact with agencies, should account for evaluation in terms of specific characteristics.

Our final analysis in this chapter divides the public by place of residence (incorporated vs. unincorporated areas). As in the first chapter, this distinction may be sensitive to those in town who have much to gain and little to lose by resource development (economic activity, water supply and flood control, etc.) and those who have more to lose, such as land loss, scenic loss, pollution from the site of development activity in the unincorporated areas. The rural (unincorporated areas) people have greater contact with agency personnel, reflecting the land use and development bias of those agencies surveyed (table 13), and are more likely to be familiar with agency programs (table 14). However, pointing to the supposition just discussed, rural respondents reacted less favorably to agency handling of land condemnation payments (table 15), as they did to the West River Diversion Project itself (see table 2).

Summary

1. Generally, agencies were evaluated favorably, with agencies proving to be the most severe critics. Community leaders' evaluations tended to be the most polarized, suggesting leaders are more frequently exposed to the "good side" of agency activities.
2. The bulk of agencies singled out because they "don't listen" to public opinion were federal, followed by state agencies. Ironically, agencies themselves reflected the highest rates of selecting out these unresponsive

agencies and showed the highest rates of selecting federal agencies into this category.

3. Agency characteristics most closely tied to support (or lack of it) were, for leaders, agency helpfulness and wastefulness, and, for the public, agency fairness with land disputes, ability to keep promises and their availability for advice and information. Similar results obtained for support of agency water projects, with the exceptions that leaders were especially sensitive to agency ignorance of local needs.
4. Town vs. rural distinctions showed rural respondents more critical of agency land condemnation and compensation practices and the West River Diversion Project generally.

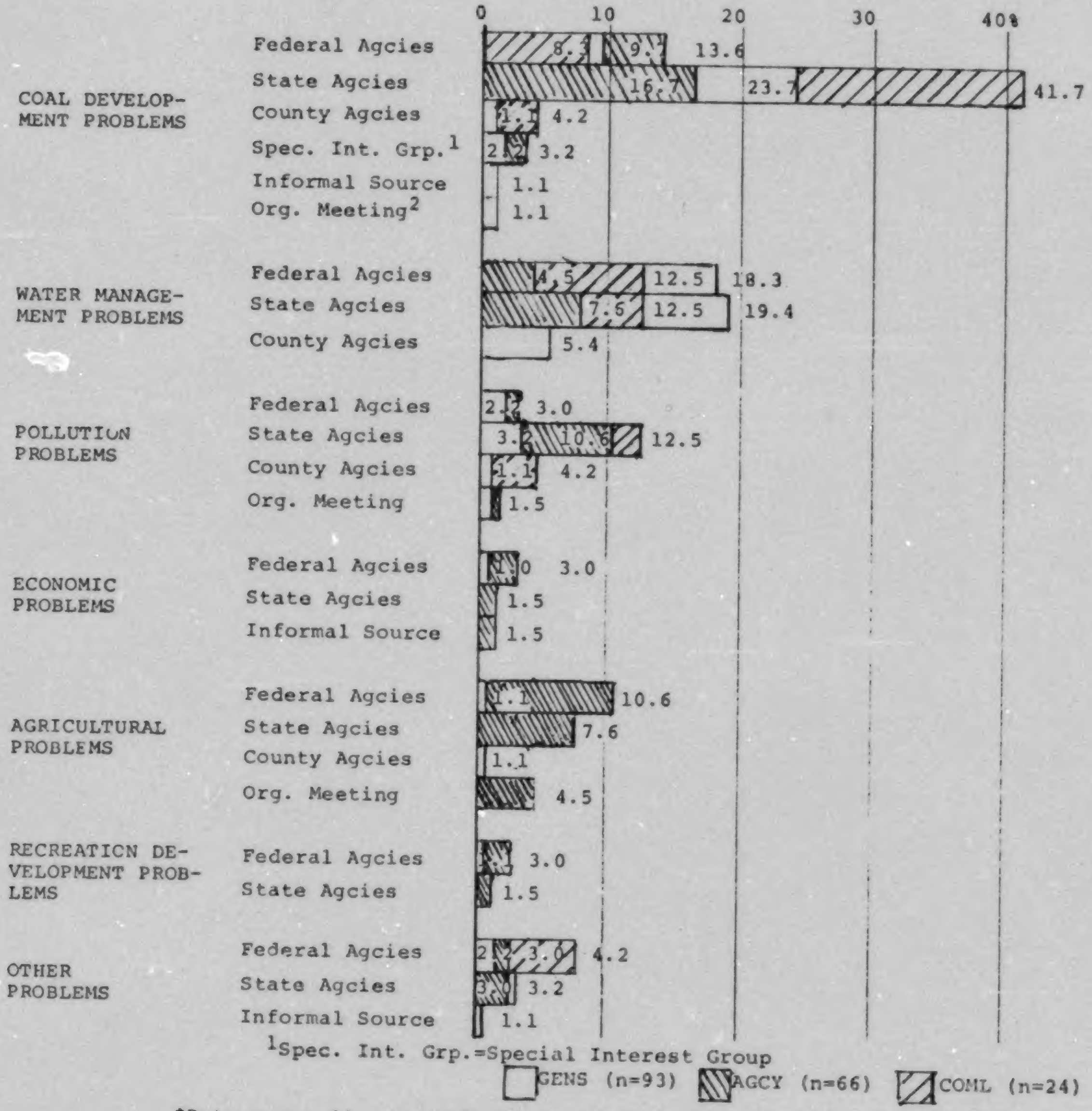
AGENCIES AS SOLVERS OF REGIONAL DEVELOPMENT PROBLEMS

So far we have focused separately on citizen conceptions of regional development and upon the images people have of development agencies. It is important to also discuss how people consider the relation between the two. What understanding do people have of the relations of agencies to development projects and policies? We attempted to find out which agencies people most often associated with regional development projects. We also asked which agencies citizens thought were best equipped to deal with specific development problems that they had named. This analysis tells us more than the relative visibility of agencies in the context of development; it also identifies the specific development competencies people assign to the agencies. It may be that some highly visible agencies will be assigned problem-solving capabilities that are very peripheral to their formal role. Such findings should raise questions about how agencies can more effectively define their roles in regional development. And, from the citizen's point of view, how can he locate appropriate agencies among the myriad of agencies involved in regional development?

Coal development and water management problems were foremost concerns among our respondents. Federal and state agencies were cited most often as problem-solvers in these areas, while more local and informal groups were considered far less often. Indeed, figure 17 suggests that "big government", not grassroots organizations, are seen as the most able in coping with development problems.

However, it is important to note that several differences occurred among the three sample groups in their reliance on various problem solving agencies or groups. For example, with coal development, only 8.3% of COML preferred

Figure 17. Major regional development problems by agency respondent feels best able to solve or provide help with problems. Data are for general population, community leaders and agency sample groups.*



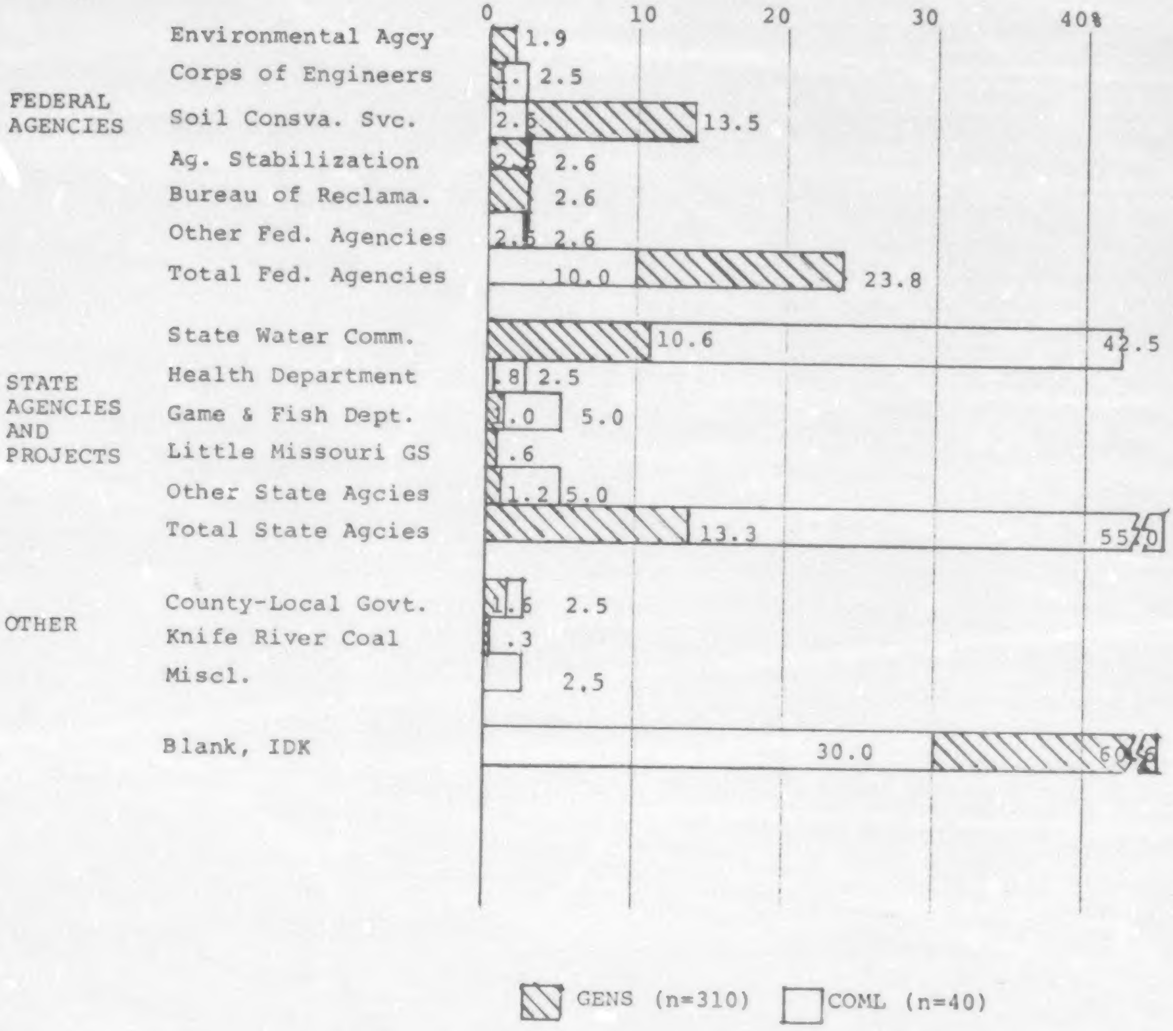
[1] Spec. Int. Grp.=Special Interest Group

*Date are cell proportions, meaning that values reflect both the emphasis given agencies within a problem area, and the weight sample groups give the problem area itself.

federal agencies compared to 41.7% preferring state agencies. General sample and agency groups showed the same preference pattern for state agencies, but to a far less extent. Water management problems, the second most active area, showed much greater consensus across the three groups for problem solving agencies. Pollution problems also achieved some consensus of opinion in that all three groups gave most emphasis to state agencies as problem solvers. Agricultural problems were emphasized by agency people, who showed some preference for the federal government as a problem-solver. Moreover, agencies were the only ones to give grassroots level organized meetings any significant mention as a problem solving source. Because agencies involved in this survey often use group meetings as a problem solving mechanism, this result is hardly surprising. Little that is meaningful can be said about sample group differences in selecting problem solving agencies for economic and recreational development problems, given the few people who viewed these areas as problems at all.

In another question, general sample and community leader respondents were asked to list the agencies they thought of as being involved with water control and area development. Agencies listed in figure 18 then are not necessarily those thought of as most competent, simply those which are most visible, to our sample groups. Reflecting findings just discussed, the emphasis given to state agencies is again apparent. Among federal agencies, the Soil Conservation Service is most visible, with little importance given to the multitude of other federal agencies involved in water management and area development plans. Among state agencies, the State Water Commission is most visible, with little attention being paid to other state agencies involved in the development of the region.

Figure 18. Agencies which general population and community leaders think of as being involved with water control and area development. Data are based on the first agency listed by each respondent.



The major difference in awareness occurring between the GENS and COML samples considered in this analysis was the relative inability of general sample respondents to identify any agency they thought of as involved in water management and development problems. Some 60 per cent of general sample respondents vs. about 30 per cent of community leaders were unable to identify agencies involved with regional development and water control.

For the most part, community leaders and general sample groups paralleled each other (those who were able to specify any agency) in their choices among state agencies. However, between federal and state groups, the greater visibility of state agencies among community leaders was quite evident. Only 10 per cent of community leaders listed federal agencies first, while 55 per cent of the same group listed state agencies. On the other hand, 22 per cent of general sample respondents listed federal agencies first, particularly the Soil Conservation Service, as opposed to 13.3 per cent "first" listings for state agencies.

Summary

Perhaps the most important conclusion in this look at agencies as problem solvers is the rather pervasive ignorance of appropriate problem solving agencies among the general public of the region. Lacking this information, one is hard put to evaluate the sponsors of programs or to identify where to seek solutions to area development problems. Of importance, too, is the emphasis on "big government" agencies as problem solvers. County and local governments, citizens groups and the like were mentioned by only a trace of the respondents.

While the number of responses made it impossible to positively identify which specific agencies the sample groups viewed as most effective in dealing with development problems, those agencies identified by large numbers of respondents suggest that they are viewed as effective as well. The Soil Conservation Service and the North Dakota State Water Commission were mentioned much more often than other organizations in this respect. The difficult question to answer here is to what extent this is an accurate picture of effective agencies, or whether the public and leaders are ignoring other agencies heavily involved or potentially quite helpful in the development process. Given the complexity of regional development and the diverse needs it imposes on planners, the public's and community leaders' focus is quite likely too narrow. More needs to be done to make visible other agencies participating in the development of the West River Region and the skills they have to offer residents in planning for the future.

COMMUNICATION BETWEEN CITIZENS AND AGENCIES

At various points in our analysis, we have looked to differences in the ways citizens, community leaders and agency officials view at regional development. These differences show a lack of consensus, but lack of consensus does not necessarily point to communication failure. Communication may contribute to consensus on development questions, but not always. Sometimes disagreements persist despite conscientious efforts at communication. Other times, an initially assumed consensus has been discovered to be false through attempts at communication which raise differences and conflicts.

Unfortunately, it has almost become a popular myth to suggest that "effective" communication enhances agreement or consensus among factions in decision-making. Indeed, individuals involved in the development process may come to better understand and more accurately acknowledge those with different viewpoints, but sought-after agreement may well lessen than improve. Recent experience in North Dakota with a large water management project, the Garrison Diversion, points to the likelihood of such an outcome. As the project progressed, what had been relatively strong consensus on its desirability developed into considerable dissension as people became better informed of project disadvantages and the disparities in project advantages perceived across individuals.

This distinction between consensus or agreement and other criteria of "good" or "effective" communication was again illustrated in a somewhat earlier study by the authors of a Park River (N.D.) water management project. Here an attempt was made to contrast consensus or agreement on the project with accuracy in identifying the probable similarities and differences in outlook on the project between groups of people involved. In other words, we not only measured to what extent groups agreed, but also assessed if each group could guess the position of the others on the benefits and disadvantages of building a dam on the Park River. The better a group was able to estimate the position of others, the higher in accuracy it was.

Both conditions - agreement and accuracy - can act independently of each other when information concerning a project is disseminated. To go back to the Garrison Diversion Project example, here was an initial instance of low accuracy (because people had in mind differing advantages and disadvantages to the project) but relatively strong agreement that it was a good idea. Only as the project developed did many people come to realize the inconsistencies among the advantages and costs held by others, resulting in reduced agreement, but improved accuracy.

In the Park River study, communication by the Corps of Engineers appeared to be successful - about two-thirds of the population was aware of the project and supported it in one form or another. When asked to estimate the advantages of the project seen by the sponsoring agency (the Corps), the public correctly saw little difference between their view of project advantages and what they believed to be agencies' view. In estimating agency perceived disadvantages to the project, the public was often unable to answer. This potential for lopsided accuracy (sure of agency view of advantages, uncertain of disadvantages) was, on further investigation, traceable to a lack of agency information on problems the proposed project could create.

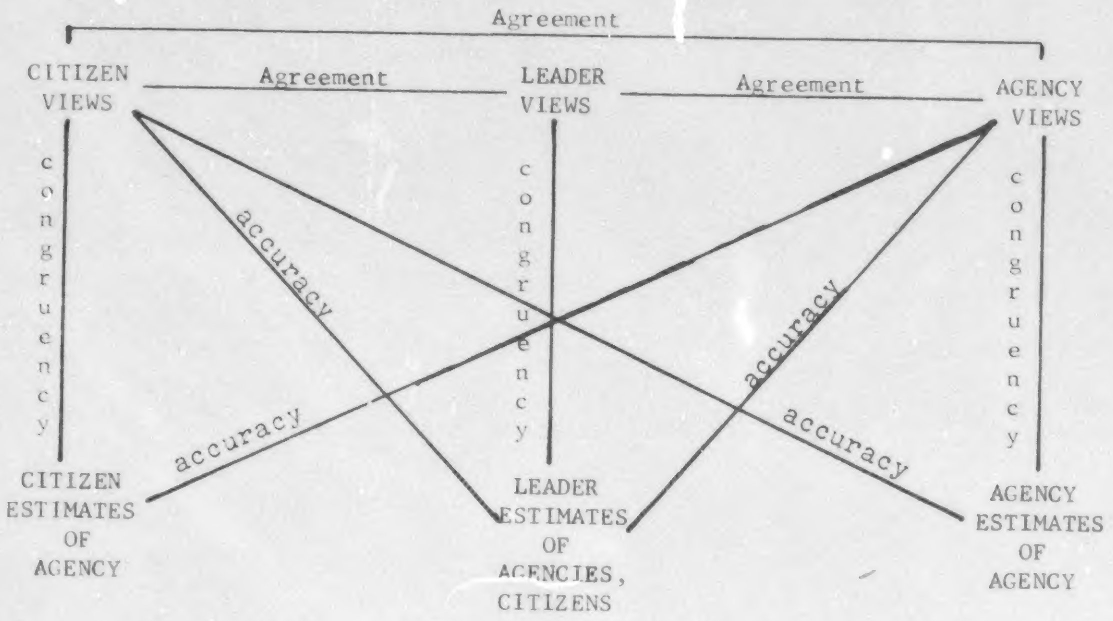
In the present study, we expanded this type of analysis to the three groups discussed throughout this investigation. Because, as discussed earlier, these groups form an important information chain for development information, accuracy becomes a critical concern as opportunities for distortion cumulate for each of the linkages in the chain.

The comparisons made among the three groups are shown in figure 18a. In addition to accuracy and agreement, a third relationship can be derived, congruency. This measure taps the differences a respondent feels exist between himself and others on development questions. We might expect, for example, that a respondent would be better prepared for inaccuracies and disagreements if he himself anticipated differences between his position on issues and those of other groups involved in regional development.

Relationships were derived from the comparison of 18 questions dealing with a variety of development questions (see appendix A, Questions: 10, 10a) These items, developed after extensive pre-test interviewing and review by people involved in resource and regional development, represent a broad sampling of important development issues facing West River region citizens and leaders.

Optimally, if we were to specify a good informational climate on West River development, it would be for high accuracy (people's estimates of other groups' standings on issues would closely match those actual standings). To apply "good" or "poor" labels independently to the status of the other two relationships would be misleading in a communication sense. For example, as discussed above, low agreement could result from effective communication. And high congruency (little difference subjectively perceived between oneself and other groups) may exist under conditions of low agreement and accuracy. Here, in short, one isn't aware of the discrepancies which exist. Yet, if agreement is high, then high congruency can indicate a rather realistic appraisal of different groups on development issues. The moral is that while each of these three measures offers a somewhat different characterization of communication effectiveness, they must be considered in relation to each other to properly evaluate the communication setting.

Figure 18a. Communication Relationships Between Sample Groups.


Agreement
CITIZEN VIEWS
Agreement
LEADER VIEWS
Agreement
AGENCY VIEWS
congruency
congruency
congruency
accuracy
accuracy
accuracy
accuracy
CITIZEN ESTIMATES OF AGENCY
LEADER ESTIMATES OF AGENCIES, CITIZENS
AGENCY ESTIMATES OF AGENCY

Definitions

Agreement - The extent to which the views of members from each group overlap the views of members of different groups.

Congruency - The overlap an individual perceives between his views and the views of members from another group.

Accuracy - The overlap between one group's estimates of the views of another group and the actual (surveyed) views of that group.

The data presented in figure 19 offers several important insights into the effectiveness of communication about West River development. First, with one exception, groups were closer in agreement on the issues than each alone had imagined themselves to be. In other words, with the exception of the COML-GENS comparison, agreement was greater than congruency. Table 15a shows the statistical significance of data comparisons in figure 19. Note that lower values in figure 19 imply greater congruency, accuracy and agreement, since the figures represent the magnitude of differences in comparisons made.

Secondly, accuracy was in all cases of group comparison the most discrepant of the relationships computed. Respondents committed the greatest errors in estimating the stand of other groups on development issues. The implication here is that information exchange among our three groups is deficient and prone to distortion and eventual misunderstanding (e.g., differences are overestimated far beyond their true magnitude). Table 15 shows the sizeable magnitude of differences involved here in all four agreement-accuracy (AGRE-ACCU) comparisons.[1]

Thirdly, contrary to the often popular stereotype that agencies are insensitive to public opinion, this group demonstrated better accuracy in estimating public opinion than the public was able to demonstrate in estimating agency opinion. Moreover, agencies perceived less difference between themselves on development issues and the public, than the public felt regarding the agencies. The reasons for this are likely twofold: (a) agency personnel keep abreast of public opinion; (b) information on agency attitudes on development questions is not making as much impression on the public as perhaps it

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[1] The greater these values, the greater the differences. Probability decimals indicate the odds that findings in the table are chance results.

Figure 19 Mean values for agreement, congruency and accuracy for four coorientational relationships among GENS, COML and AGCY sample groups.

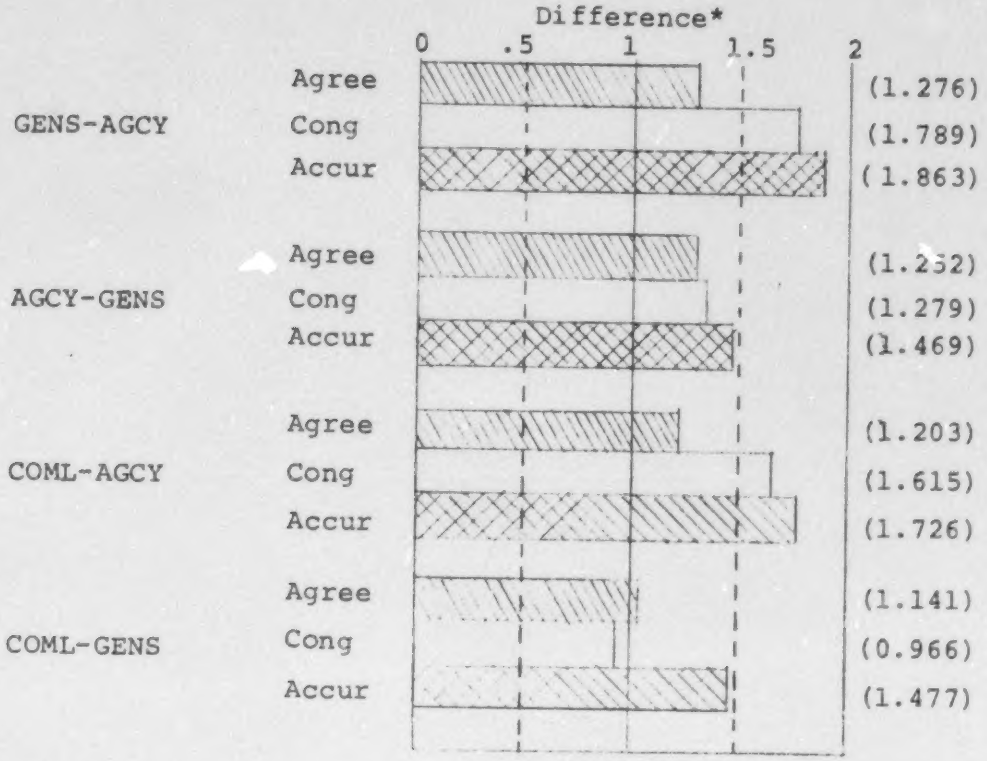


Table 15a Tests of difference among agreement, congruency and accuracy measures for four sample relationships

t-test values for	AGREE-CONG	CONG-ACCUR	AGREE-ACCUR
GENS-AGCY	-10.42[c]	-1.52	-14.07[c]
AGCY-GENS	- .27	-1.86[a]	-2.71[c]
COML-AGCY	- 3.02[c]	.76	-3.94[c]
COML-GENS	1.54	-4.19[c]	-2.47[b]

[a] p≤.05
[b] p≤.01
[c] p≤.001
} df≥40

Table 16. Comparisons of accuracy, congruency and agreement among COML, AGCY, and GENS.

		RELATIONSHIP	MEAN PCD^2	t PCD^2
ACCURACY				
(1)	vs	COML-AGCY	1.726	-1.304
		GENS-AGCY	1.863	
(2)	vs	COML-GENS	1.477	.068
		AGCY-GENS	1.469	
(3)	vs	GENS-AGCY	1.863	6.075***
		AGCY-GENS	1.459	

* $p \leq .05$
** $p \leq .01$
*** $p \leq .001$

Table 17. t-tests for collective involvement predictors of GENS-AGCY and COML-AGCY accuracy and congruency.

GENS	ACCURACY			CONGRUENCY		
	No	Yes	t	No	Yes	t
Involved in action groups	1.8895	1.5495	2.16	1.681	1.974	-1.04
Involved in interest group	1.8757	1.8664	.10	1.7278	1.6624	.51
COML						
Involved in action groups[1]	--	--	--	--	--	--
Involved in interest group	1.8937	1.7719	.50	2.8965	1.4158	4.29*

[1] frequencies were insufficient for stable comparisons
*$p \leq .05$, pooled variance estimate

should. Agencies probably should be more open with their recommendations to the public than they have been to date. It is reassuring to note, however, the extent to which agencies accurately perceive public opinion on development questions.

Finally, we held strong hopes that community leaders in this analysis would show themselves to be the effective information brokers between the public and agencies they have been in many studies of rural development. In this light we expected that community leader accuracy estimates of general sample and agency opinion to be superior to the accuracy estimates general sample and agency people made of each other. This kind of finding would point strongly to the facilitating role we had expected of leaders. Unfortunately, community leader accuracy was no better than that of the agency and general sample groups alone. Indeed, as table 16 shows, differences in comparing GENS-AGCY with COML-AGCY accuracy shows insignificant differences (1.863 vs. 1.726). Comparison for the other linkage (AGCY-GENS vs. COML-GENS) showed equally insignificant differences (1.469 vs. 1.477). In short, the presence of community leaders did nothing to improve accurate communication between agencies and the general public.

Our analysis next turned to alternative sources of information for the public and community leaders on agency development priorities. Of first concern to us was the effectiveness of groups in aiding the member to gain awareness of development plans. In doing so, we distinguished two kinds of groups: (a) informal interest groups or simply others with whom the individual had discussed regional development issues, and (b) more formal participation in action groups which actively pursued development issues. Neither form of group participation for either the general public or community leaders made any significant difference to accuracy in perceiving agency development priorities, though some statistically marginal improvement in accuracy occurred among general sample respondents involved in action groups (see table 17).

We were also interested in whether group participation affected subjective feelings of difference from agency positions. As discussed above, the congruency relationship gives us this information. For general sample respondents, group membership - regardless of intensity - had no real effect on congruency. For community leaders, however, interest group participation enhanced rather strongly feelings of closeness to agency stands on development issues. Due to the few leaders involved in action groups, we were unable to make similar comparisons here. This evidence suggests that community leader discussion on development projects tends to be supportive of agency stands and goals held in common by leaders and agencies. Had the discussion been otherwise, we would have expected the interest group sample to show greater incongruency or less similarity between themselves and agency positions.

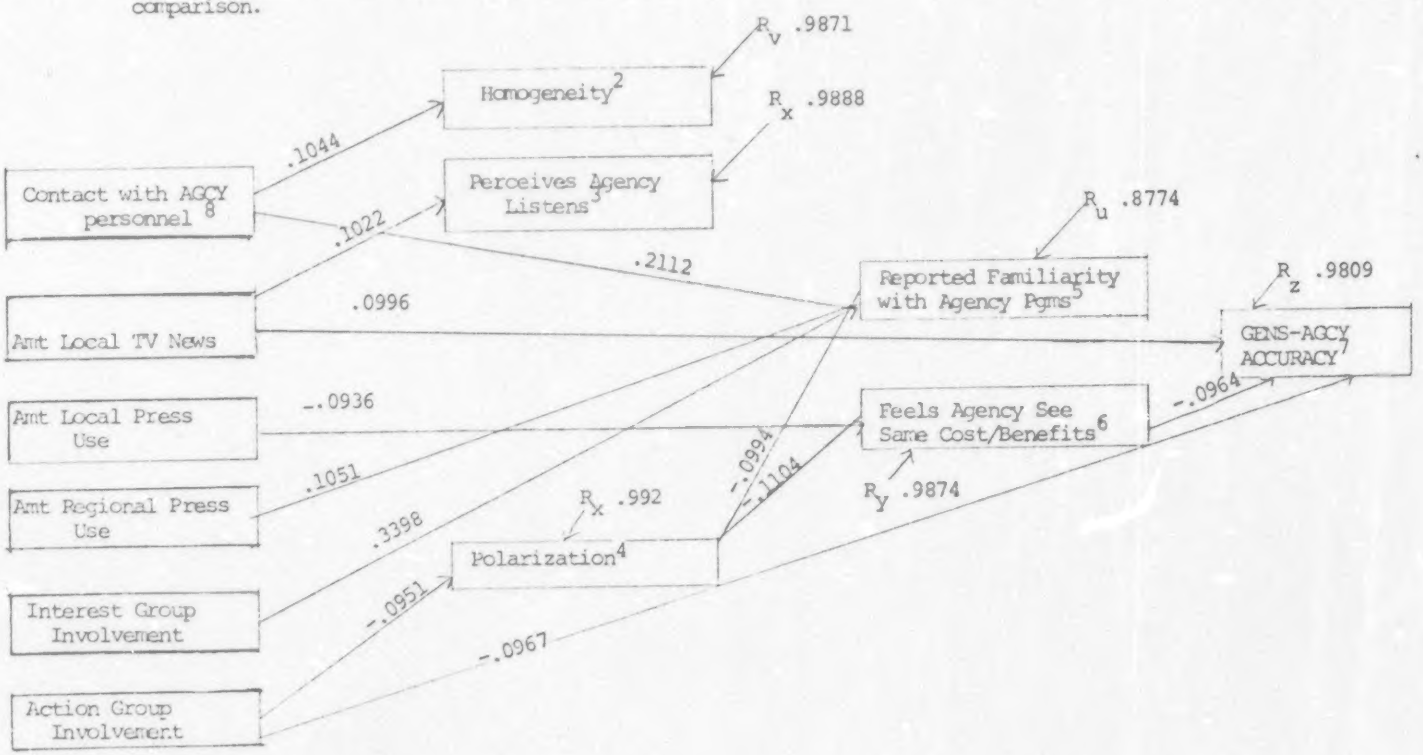
Beyond interest groups, there are a host of information sources which might better acquaint the public and community leaders with agency positions on development issues. Examples range from the groups we have just discussed to the press and agency agents. Also, there are psychological conditions which can facilitate or impede assimilation of this kind of information. For example, the tendency of individuals to stereotype agencies, to see them as uniform from one to the next, perhaps unfavorably, could blunt the impact of information they have to offer. Additionally, the feeling that agencies "listen well" to the public can affect how receptive we are to information from these offices. Our question in the face of these conditions was to what extent do traditional information sources and several basic psychological conditions bearing on readiness to listen affect accuracy in perceiving agency development priorities.

To further complicate the issue, we also were curious about what kind of relationship there was between a conscious feeling of being informed and in agreement with agency programs and the kind of independently derived accuracy we've been discussing.

Fortunately, several powerful, but admittedly speculative analytic tools are available to treat these several questions simultaneously in relationship with each other. While statistically somewhat complex, the basic technique is illustrated in figures 20 and 21, with some simplifications. In these illustrations, information sources, feelings and images which facilitate or curtail source use are arranged in a casual pattern - information sources first in order, followed by images, items tapping feelings of familiarity and closeness to agencies, and, finally, the object of these predictive antecedents, accuracy. Stereotyping has been divided into the two component parts discussed in the previous chapter - homogeneity and polarization.

Perhaps the most striking feature of figure 20, the analysis for GENS-AGCY accuracy, is that comparatively few antecedents of accuracy are determined. Direct effects from information sources are only two: local television news and action groups. Ironically, local TV news serves slightly to reduce accuracy. Whether this is a direct effect of televised information is difficult to positively ascertain. However, the marginal TV service available to much of the West River area with small news operations does not encourage thorough coverage of complex issues such as energy development and may displace people's attention from more productive sources. Action group participation, contrary,

Figure 20. Path analysis[1] of hypothetical predictors of accuracy. Path coefficients are standardized regression coefficients (beta weights). Data are for general sample respondents. Accuracy is based on GENS-AGCY comparison.


Contact with AGCY personnel 8
Amt Local TV News
Amt Local Press Use
Amt Regional Press Use
Interest Group Involvement
Action Group Involvement
Homogeneity 2
Perceives Agency Listens 3
Polarization 4
Reported Familiarity with Agency Pgms 5
Feels Agency See Same Cost/Benefits 6
GENS-AGCY ACCURACY 7
R v .9871
R x .9888
R u .8774
R z .9809
R x .992
R y .9874
.1044
.1022
.2112
.0996
-.0936
.1051
.3398
-.0951
-.0967
-.0994
-.1104
-.0964

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[1] These are cross-sectional data arranged in a hypothetical time-causal ordering. The model has been trimmed, eliminating statistically non-significant paths (p .05) and all correlations among variables presumed to occur at the same time point in the model.

[2] higher values = less homogeneity

[3] higher values = agency listens less

[4] higher values = less polarization

[5] higher values = more familiarity

[6] higher values = sees same benefits/costs

[7] higher values = less accuracy

[8] higher values for information input variables=greater use, participation or contact

does increase accuracy, reflecting that conclusions drawn from general sample data in table 17 does hold with other forms of information acquisition controlled.

Stereotyping components - polarization and homogeneity - are lessened with increased information source contact. Increased contact with agency personnel serves slightly to reduce homogenization of agencies while action group involvement tends to reduce polarization. Stereotyping components, in turn, failed to have effect on accuracy, though polarization was negatively related to a feeling of familiarity and similarity of attitude with agency programs. Thus, less polarized persons feel more familiar with agency programs and see greater similarity between the agencies' and their view of development issues. However, these comforting feelings are not reflected in "real" accuracy.

Respondents' feelings of familarity with agency programs showed the strongest relationships to information sources, primarily contact with agency people, regional press (e.g., Bismarck, Fargo, Minot or Billings dailies) use and interest group involvement. This finding is disturbing in that feelings of familiarity are not tied to "real" accuracy. The implication is that existing information sources lead to a somewhat false impression of familiarity not backed by more objective measures. Thus, highly used common information sources not only fail to serve accurate perceptions of agencies, but also give the misleading impression that they do.

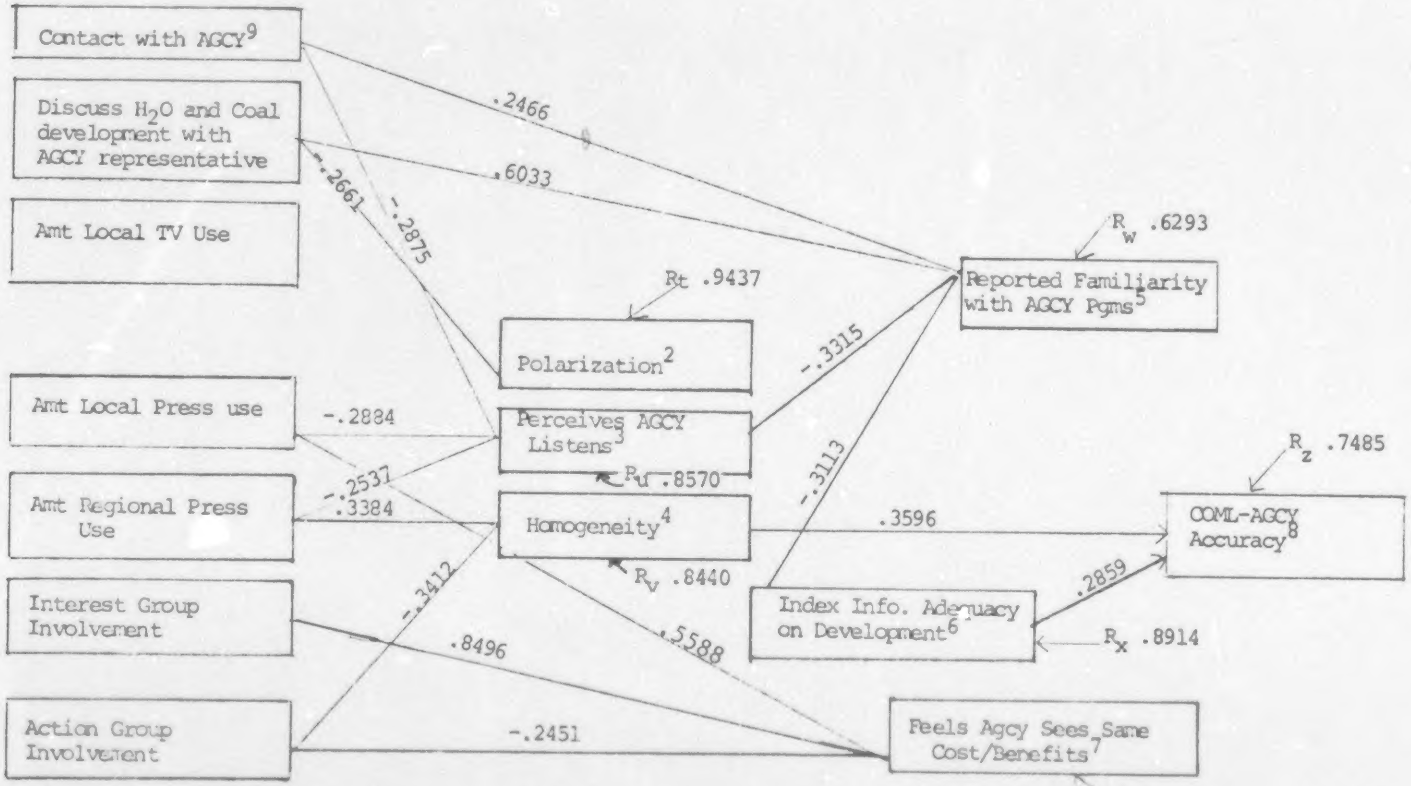
An impression that agencies "listen" and are responsive to public opinion was less among those with television exposure, a finding congenial to the notion that agency public relations problems are most visible with television sources. Our expectations that feelings of agency accessibility would lead to accuracy and perceived familiarity with agency programs did not materialize.

A somewhat similar set of relationships resulted in the analysis shown in figure 21 for community leaders - agency accuracy. With two exceptions, that basic layout of the analysis was the same as above. An additional information source (discussion of water and coal development with agency representatives) and an attitudinal question on the adequacy of development information available were brought into the analysis.

Our expectations that community leaders would be especially sensitive to information sources and hence reflective of their anticipated high accuracy in perceiving agency views were not met. No informational variables had direct effect on accuracy. Two sources, regional press use and action group involvement, showed indirect relation, except that their effect was dependent on homogenization, one of the two stereotyping components. The two information sources acted differently upon homogenization; regional press use reducing homogenization of agency image while action group involvement tended to increase this effect. In turn, and somewhat contrary to initial expectation, increased homogenization improved accuracy. As Carter (1962) suggests, homogenization may not be a necessarily negative force in communication, but may instead chart the development of a stable impression of agencies which is useful to their understanding. Polarization had no significant effect, direct or indirect, upon accuracy.

The strongest causal relationships shown were between information sources and self-report variables. Local press use and involvement in interest groups were especially predictive of an enhanced feeling by community leaders that they perceived the same costs and benefits of development as did the agencies. Contact with agency personnel and especially discussion of water and coal problems with them were strongly predictive of reported familiarity with agency programs.

Figure 21 : Path analysis[1] of hypothetical predictors of accuracy. Path coefficients are standardized regression coefficients (beta weights). Data are for general sample respondents. Accuracy is based on COML-AGCY comparison.



Contact with AGCY9
Discuss H2O and Coal development with AGCY representative
Amt Local TV Use
Amt Local Press use
Amt Regional Press Use
Interest Group Involvement
Action Group Involvement
.2466
.6033
-.2661
-.2875
-.2884
-.2537
.3384
-.3412
.8496
-.2451
Polarization2
Rt .9437
Perceives AGCY Listens3
Ru .8570
Homogeneity4
Rv .8440
-.3315
-.3113
.3596
.5588
Reported Familiarity with AGCY Pgms5
Rw .6293
Index Info. Adequacy on Development6
Rx .8914
.2859
COML-AGCY Accuracy8
Rz .7485
Feels Agcy Sees Same Cost/Benefits7
Ry .6087

[1] These are cross-sectional data arranged in a hypothetical time-causal ordering. The model has been trimmed, eliminating statistically non-significant paths (p .05) and all correlations among variables presumed to occur at the same time point in the model.

[2] higher values = less polarization
[3] higher values = agency listens less
[4] higher values = less homogenization
[5] higher values = more familiarity
[6] higher values = more adequate
[7] higher values = see same cost?benefits
[8] higher values = less accuracy
[9] higher values info. input var. = more input

Indirectly, contact with the agency, local press use and regional press readership fostered an impression that "agencies listen" which, in turn aided reported familiarity with agency programs. Consequently, most information source usage served to increase the feeling among community leaders of familiarity and sameness with agency programs and views. Regrettably, as with the general population sample, these subjective impressions were not backed by more objective measures of accuracy.

Finally, it is interesting to note the lack of any significant linkages to local television news as an information source. Clearly, other sources have edged television aside, at least in terms of effect on community leaders' accurate perception of agency positions on development issues. However, given the negative contribution to accuracy of television news for the general public, lack of effects perhaps should not be mourned.

Summary

1. The public and community leaders generally are more in agreement with agencies than they realize on development priorities.
2. The public and community leaders tend to be worse at estimating the agencies' stand on development issues than agencies are at estimating the public's position. This finding carries the implications that (a) agencies are reasonably sensitive to public opinion, and (b) information outlining agency development priorities to the public are not having enough impact.
3. Community leaders generally are ineffective information brokers between the public and agencies. These latter two groups do just as well on their own.

4. Traditional information sources (ranging from interest and action groups to the mass media and agency personnel) have little effect on improving accuracy of communication when measured objectively. Generally, and perhaps dangerously, these sources do increase subjective feelings of familiarity with the agencies. Most of the attitudinal variables employed in this part of the analysis, in particular stereotyping, had little predictive impact on accuracy.

notes:

Carter, Richard F. (1962). "Stereotyping as a Process." Public Opinion Quarterly 26:77-91.

SOURCES OF INFORMATION ON REGIONAL DEVELOPMENT

An important objective of this project is to provide some recommendations for improvement of communication between the various groups involved in regional development. Such recommendations will not be easy to come by. It is far easier to identify what communication problems are occurring than it is to correct them. Before making any recommendations for resolving the communication deficiencies we have identified in this study, we will take a close look at the means by which people exchange information about development. These means of exchanging information, whether some form of interpersonal or mediated communication, comprise what we can term the "information system" of the area. By examining individuals' use of this system, and considering use against the extent to which individuals are informed, we hope to assess the effectiveness of the present information system. In what ways is it performing effectively? What are some of its weaknesses?

We have developed a number of ways of describing the information system and people's use of it. On the one hand, we will describe communication via interpersonal systems - both in terms of the contacts citizens have with agency representatives, and in terms of formal and informal organizations within the area that are concerned with development problems. On the other hand, we will consider area mass media - how they are used, and whether people regard them as useful sources of development information.

Basic Sources

The sources of information first used and those tapped for follow-up information are described in table 18 for the public (CENS) and community leaders (COML). What is perhaps most strikingly apparent is the relatively low use of agencies as a source of first information on the West River Diversion

Table 18. Sources of first and later information on West River Diversion Project for Community Leaders (COML) and General Population respondents (GENS).

	Source of First Information on Project		Source of Additional Information on Project	
	GENS	COML	GENS	COML
Federal Agencies	.9	2.5	.3	--
State Agencies	1.6	5.0	.3	5.0
County/Local Agencies	1.5	--	--	2.5
Special Interest Groups	.6	--	--	--
Private Firms	.9	--	.6	--
Personal Sources, people, friends	9.0	30.0	.9	2.5
Newspapers	20.6	17.5	1.6	--
Other Media	5.8	10.0	.6	2.5
Organized Meetings	5.1	10.0	1.2	10.0
Other	.3	--	--	--
Blank	2.9	5.0	.7	--
Unaware of WRDP	50.3	20.0	--	--
No Addt'l Info Sought	--	--	93.1	77.5
N	(310)	(40)	(310)	(40)

Project. Some increase in use comes when follow-up information is desired, especially by community leaders, but the prevalent sources remain personal contacts, the mass media and organized meetings. We will discuss later in this chapter the feelings of agency personnel on their own information/public relations efforts, but their result, whatever those efforts are, seems minimal, with the possible exception of community leaders who bother to seek additional information. Here about a third (7.5%) of the 22.5% of leaders desiring follow-up information went to agencies. It cannot be adequately stated that this increased agency use reliably occurred for general sample respondents owing to the extreme few (6.9%) who sought any follow-up information at all. Moreover, given the importance of West River development it is somewhat disturbing that so few in both groups desired added information on the projects planned.

Important differences occurred between leaders and the public - leaders seeming to favor personal contacts (30%) and the public the newspapers (20.6%) as the most popular source of first information on the project. Organized meetings also were a strong source for leaders, especially for follow-up information on the project. These differences seem reasonable in light of the leaders' presumed role of frequently participating in government and/or having personal contact with those that do. Here, too, with the exception of newspapers, we see a higher information source use by the leaders in most categories reflecting their (leaders') 30.3% increased awareness of the project compared to the public.

These data should suggest several alterations to present information policy on the West River Project. First, most agency generated information is only indirectly reaching the public, largely through the press, and leaders through a chain of acquaintances. Agencies will have to step up qualitatively and quantitatively their public information efforts, or suffer the distortions, inefficiencies and delays of these indirect methods of dissemination. Secondly, it is a circular question to ask whether the lack of public awareness on initial and particularly follow-up information on the project is a consequence of public apathy or agency public information inadequacies. Our experience suggests that both factors are at play, but only one, the availability of plentiful, easily accessible and understandable information, is under direct control of agency personnel to remedy. Third, the popularity of certain sources should not be overlooked. Additional information dissemination efforts likely should be devoted to those media and sources which are widely used by our sample groups. Later in this section we will discuss this last point in greater detail.

We were interested as well in the effects of West River Diversion on jobs and lifestyle, and whether those who anticipated these effects keenly would show different patterns of information source use. The data in table 19 indicate that some differences were apparent between those believing the project would have an effect on their jobs versus those who did not. Most differences are seen in increased reliance on agency and informal sources and a decrease in mass media as "first awareness" sources among those believing the project will affect their jobs. These differences probably signal (a) some differences caused by farmers anticipating land losses who remembered the project from informal discussion and neighborhood gossip and (b) efforts by agencies to contact those whom they felt would be most affected by the project. It is surprising, assuming that some who anticipated an effect their job would see a negative effect, that there wasn't more involvement by

Table 19. Source of first information on West River Diversion by relevance of project to job. Data for general population sample only*.

Information Source	No Effect	Effect on Job
Agencies (federal, state and local)	6.6%	21.1%
Firms and Special Interest Groups	2.2	3.0
Informal Sources	18.8	27.2
Organized Meetings	11.1	12.1
Mass Media	61.1	36.3
n	(90)	(33)

*similar data were collected for COML respondents, but low frequencies ruled out crosstabulation.

Table 20. Source of first information on West River Diversion Project by whether or not the respondent has reasons against completion of the project. Data for general population respondents only*.

Information Source	No Con Reasons	Con Reasons
Agencies (federal, state and local)	8.2%	10.0%
Firms and special interest groups	2.3	1.7
Informal Sources	22.4	18.3
Organized Meetings	11.7	11.6
Mass Media	55.2	58.3
n	(85)	(60)

*similar data were collected for COML respondents, but low frequencies ruled out crosstabulation.

them with organized meetings compared to the "no effect" group. It is possible that the visibility of the West River Project is not yet great enough to spur this kind of collective activity.

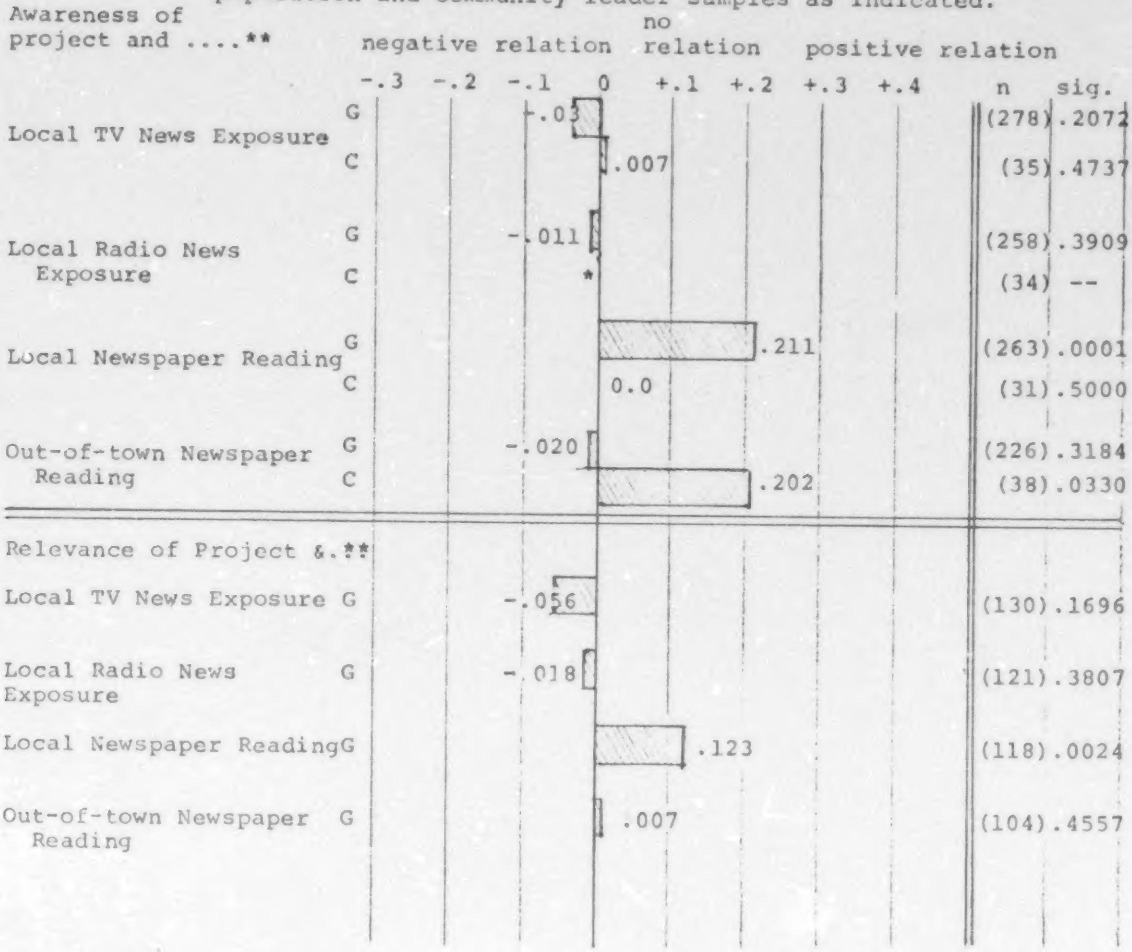
The results in table 20 provide some added insights into information source differences. Respondents were divided according to whether they had reasons against completion of the project or not. In short, there are no real differences between the two groups, indicating that negative reasons toward the projects did not evolve from or result in use of different sources from those indicating only positive reasons for West River Diversion. Why no differences here when those who believed their job would be affected had markedly different information source use patterns? A likely reason, recurrent in communications research, is that project effect on jobs indicates a high level of importance of the project to the individual. In contrast, those listing negative reasons for the project may have listed positive ones as well in greater number (both pro and con comments were requested in our survey) and may not have viewed the project as having direct consequences on their day-to-day living. In short, the heightened importance revealed by effect on job, likely contributed to use of different sources. These differences should be recognized in future public information activities by agencies, particularly increased use of informal sources and direct contact with agencies themselves.

So far we've been considering the role of the mass media as a group and have not done much to separate out effects of, say, TV or local newspapers on awareness of West River Division and its perceived relevance. The relationships of project relevance and awareness to four media are shown in figure 22 for the general public and community leaders. Only two media, local and out-of-town newspapers, had any significant effect on increased awareness of the project. Yet effects were quite different for the sample group considered. Community leaders' awareness was associated with out-of-town newspapers use - not use of the local press. The reverse was true for the public whose awareness was related to local press use but not to out-of-town papers. The moral for public information policy here is that no one blend of media (or single medium) will optimally service all consumers of information. These results also reinforce much previous research (cf. Rogers, Lazarsfeld, et al) demonstrating different and more cosmopolite - big city - information sources for those in leadership positions.

We computed similar measures of association between relevance felt for the project and use of various media for the general public (bottom half, figure 22). As with awareness of project, local newspaper use provided the only significant relationship with relevance. What is surprising, is the comparative ineffectiveness of television and radio, where in fact weak negative relationships (none statistically significant) raise the possibility again that electronic media in this situation (a) do not provide sufficient information on West River Diversion and (b) displace use of media such as newspapers which seem better able to provide this information. This outcome follows closely a conclusion of the previous chapter (Communication Between Citizens and Agencies) where television provided either no or negative effects on the accuracy of perceiving agency view on regional development.

Given the differences we've discussed in effectiveness among several mass media, we might hope that the most effective media (at least in terms of engendering a sense of basic awareness of project and its importance) would be the most preferred and used by respondents for local news. Figure 23 makes quite plain that local newspapers are distinct second choices compared to

Figure 22. Coefficients of relationship (Kendall's Tau) between awareness by or relevance of West River Diversion project to the respondent and local television news, local radio news, local newspaper and out-of-town newspaper exposure. Data are for general population and community leader samples as indicated.



*low cell frequencies disallow calculation

**positive relationships imply greater media exposure or project relevance together with greater awareness, negative relationships imply greater media exposure with less awareness.

Figure 23. Preferred local news media for general population and community leader samples.

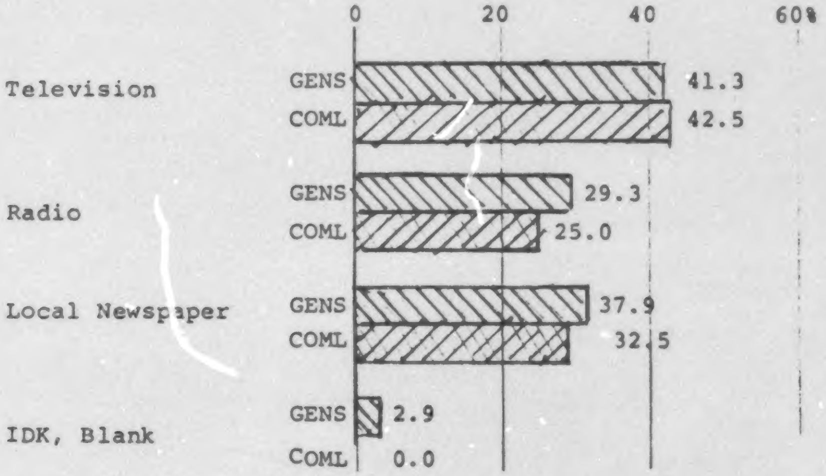
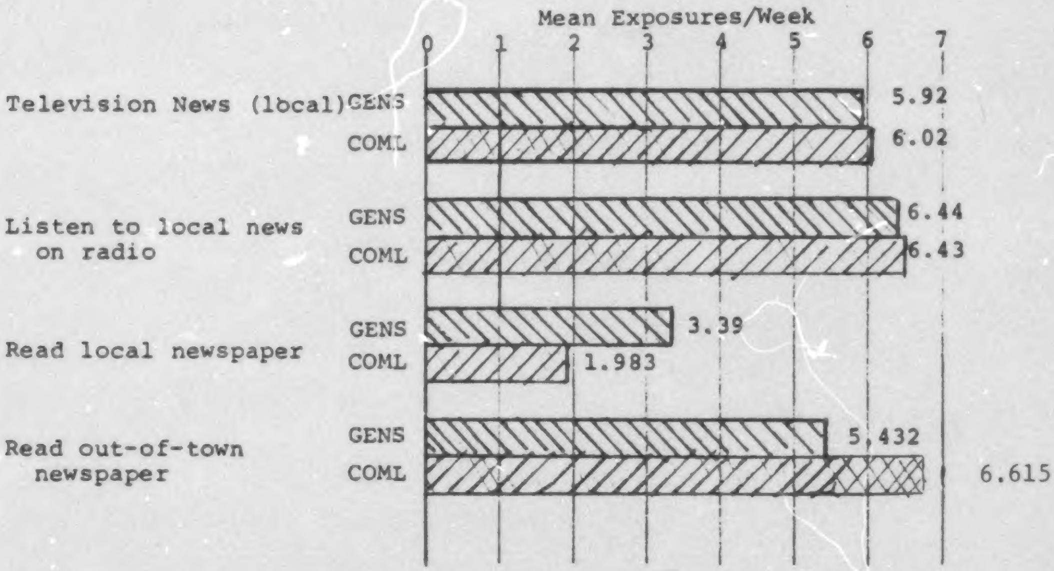


Figure 24. Mean level of media use expressed as viewings or issues read per week for general population and community leader samples.

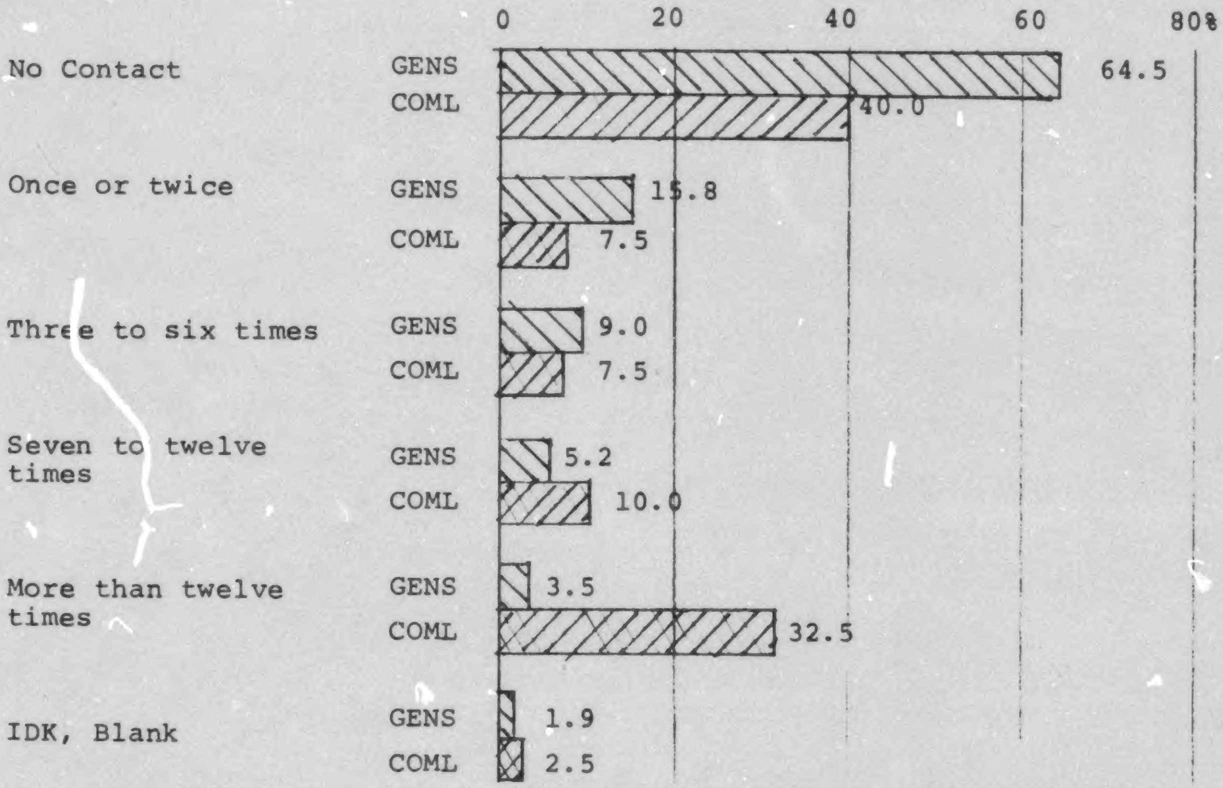


television news for both the general public and community leaders. Radio for both groups came in close behind newspapers for third place in preference. Unfortunately, our format did not allow us to assess out-of-town newspapers as well, but we have little grounds to suggest, given the local news scope of the question, that out-of-town newspapers would fare even as well as the second place local press. It is also interesting to note that the difference between the public and community leaders in media best related to project awareness and relevance were not reflected in those most preferred for local news.

Figure 24 gives us a rough quantitative gauge of media use in the West River area for the public and leaders. Generally, our sample groups seem to be consuming print media as fast as it can be supplied, given that local newspapers frequently are weekly or biweekly issues at best. Average use of media other than the local press approaches a once-a-day use rate (averages ranging from 5.42 to 6.62 viewings/issues per week). The one difference of note is press use between leaders and the public. Here the predeliction of leaders for out-of-town (regional) papers is clear, though this preference is at the expense of local press use.

The public and leaders showed some marked differences from each other in their rate of contacting agency personnel. As shown in figure 25, the majority of the public had no contact with agency representatives during the year period assessed, while only 40 per cent of the community leaders reported contact. The difference, magnified and reversed, showed up at the other end of the measurement range where about a third (32.5%) of community leaders had contacted agency representatives more than twelve times in the one year period compared to only 3.5% of the public. These contrasts show that the audience

Figure 25. Proportion of general population and community leader samples by level of contact in past year (8/73-9/73) with development agency personnel.

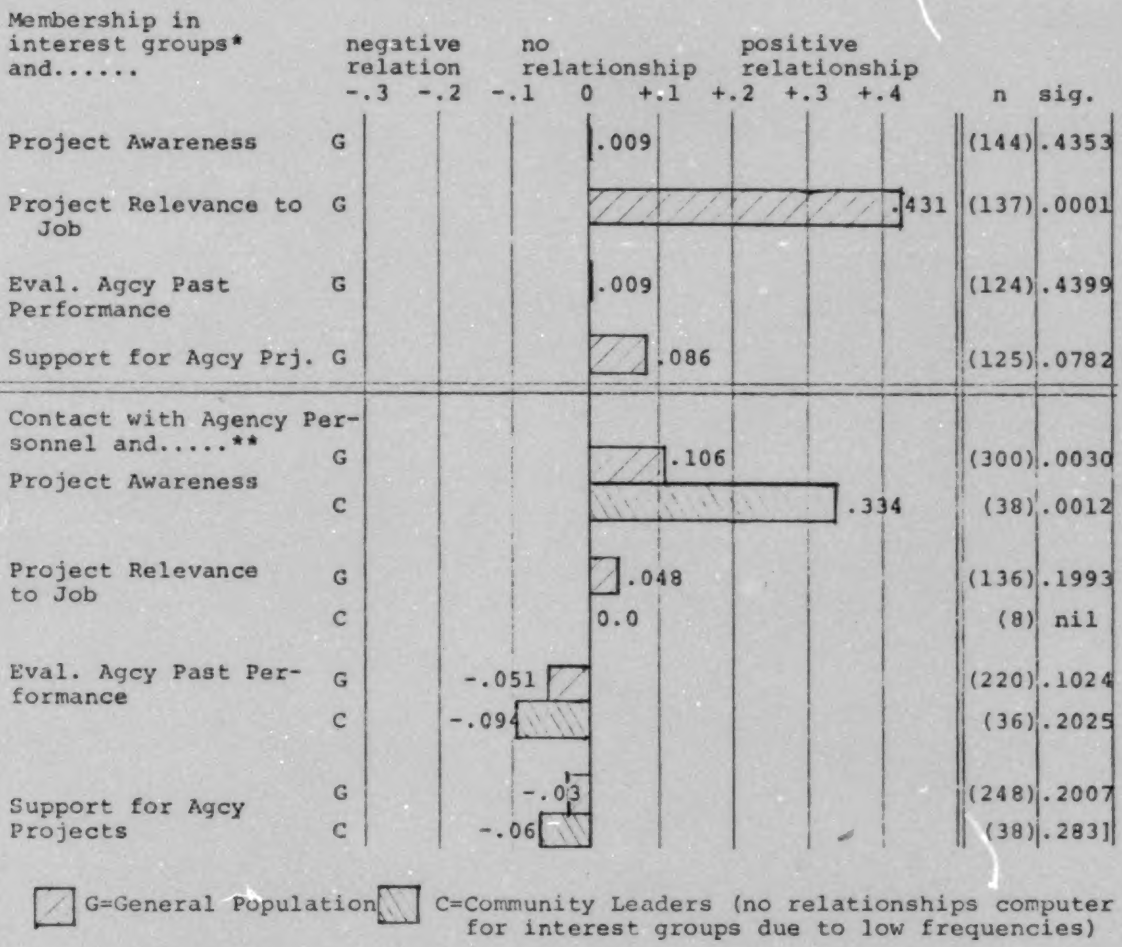


for direct agency information is somewhat limited and specialized to the community leadership. Our discussion in the previous chapter assessing their problems in adequately relaying information should suggest that agencies make improved attempts to speak to the public directly and put, perhaps, less reliance on the leadership as information carriers.

Were contacts with agency personnel related to project awareness and relevance? Results presented in the lower half of figure 26 only give reliable indication that agency contact was related to project awareness for both leaders and the public. The relationship, however, was much stronger for the community leaders, as might be concluded from their greater reliance on this source. There was essentially no reliable relationship with project relevance to job, evaluation of agency past performance or support for agency projects. These last two relationships suggest that agency contact is not biased toward supporters, but rather appears open to those who disagree or have no firm stand on agency past work as well. Indeed, if one wishes to speculate on the weak negative relationships shown here, contact perhaps slightly favors those critical of the agencies.

Membership in interest groups (see top half of figure 26) was strongly related to relevance of the West River Diversion Project to one's job. This result suggests, together with the data in table 19 discussed earlier, that relevance much more than awareness triggers discussion and the formation of interest groups. While this logic is hardly astonishing, it does suggest that to spur debate and discussion, information on project impacts might concentrate on job and income questions and outcomes rather than simple description of what is to be done. In short, there seems to underly these results a desire on the part of the public to know specifically project effects on their lives: what it will do to income, employment and kinds of jobs available.

Figure 26. Coefficients of relationship (Kendall's Tau) between interest group participation or contact with agency personnel and awareness, relevance to job, past performance of agencies involved in and support for West River Diversion Project.



*positive relationships indicate membership in interest groups are associated with greater project relevance to job, greater support for agency projects, etc

**greater contact with agency personnel is associate for positive relationships, with greater project awareness, greater job relevance. For negative relationships, greater contact is associated with somewhat reduced evaluation of agency past performance and support, though not to statistically meaningful extent.

The remaining data in this figure - evaluation and support for agency projects - should counter any impression that informal groups would form solely to exercise complaints. Indeed, while this may be the wont of some groups, our findings indicate little relationship between participation in informal groups and evaluation pro or con of agency past performance, and a weak positive relation suggesting that group discussion may promote some favorable support for agencies.

Collective Involvement

An analysis of community social structure, relevant to the WRDP and to community problems, showed a minority of citizens to be collectively involved for these purposes. It is important to point out, however, that this was not the usual analysis of group membership and level of participation. We sought to identify only those memberships and activities that the individual connected with the WRDP and with community problems. Less than 20 per cent of COML and GENS groups know of other people who shared their feelings about WRDP - i.e., identified with an "interest group" (figure 27). And only a fraction (3%) were involved in groups taking action supporting or opposing the project - i.e., members of "action group". Thus, the existing social structure hardly seemed designed to facilitate informal communication among citizens about the WRDP.

It proved difficult to identify the particular interest and/or action groups to which citizens referred. Often GENS respondents simply shared their interests with other people, and could give no other label for the group (table 21 - upper half). COML's did not name specific individuals, but neither did they name any particular organizations very often. Even agricultural organizations were cited very infrequently. By the same token, respondents were largely unable to label the action groups concerned with the WRDP. A

Figure 27. Collective involvement in West River Diversion Project, noting proportion involved in informal groups (eg. "People you think of sharing your feeling about the plan") and action groups (eg. "...groups that are taking definite action eith supporting or opposing the project") for GENS and COML.

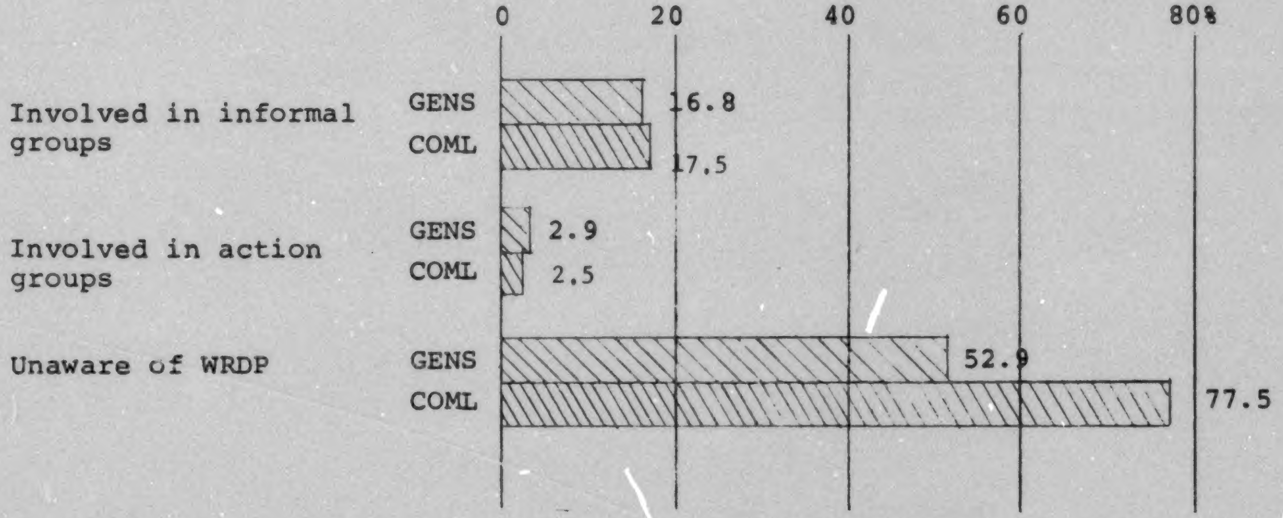


Table 21. Collective involvement by type of group for informal and action groups. Results for general sample and community leader respondents as percent.

	GENS	COML
INFORMAL GROUPS		
Named People	10.3%	-
Civic Organizations	1.6	-
Businessmen	1.3	-
Agricultural Organizations	2.3	2.5%
Other	-	10.0
IDK, Blank	31.6	10.0
Unaware of WRDP	52.9	77.5
ACTION GROUPS		
Water Management Agency	0.6	2.5
Farmers' Union	1.0	-
Chamber of Commerce	0.6	-
IDK, Blank	44.8	20.0
Unaware of WRDP	52.9	77.5
n	(310)	(40)

few people mentioned water management agencies and the Farmers' Union, but not many (table 21 - lower half). These results point to the lack of discussion on West River Diversion in the community social structure.

This picture changed somewhat when we shifted the focus from the WRDP to "community problems". Here the difference between GENS and COML was especially strong, with 18 per cent of GENS citizens working on community problems and 70 per cent of the COML's reporting that they have worked on community problems (figure 28). With the exception of charitable drives, COML's reported more participation on every type of community problem - education problems, community improvement, community services and agricultural problems. It was apparent from the type of problems mentioned that participation was strongly tied to the local level; only "agricultural problems" give any implication at all of direct involvement with regional development.

As would be expected, action taken on community problems involved predominately group efforts (figure 29). Both GENS citizens and COML's were more likely to take group action than to act on their own, although GENS citizens were more likely to act on their own than COML's.

In the sum, the analysis of community social structure has shown very little connection between local social organization and the WRDP in contrast to the strong collective arrangements oriented toward highly localized community problems.

Community Leaders and Sources

Though we have already described the sources for this group above, owing to their critical role as information brokers, we need more information on their sources and audiences. Our leaders were not very gregarious with agency obtained information. Some 80 per cent of leaders, including those who had

Figure 28. Proportion of general population and community leaders samples which have worked on community problems generally and by type of problem.

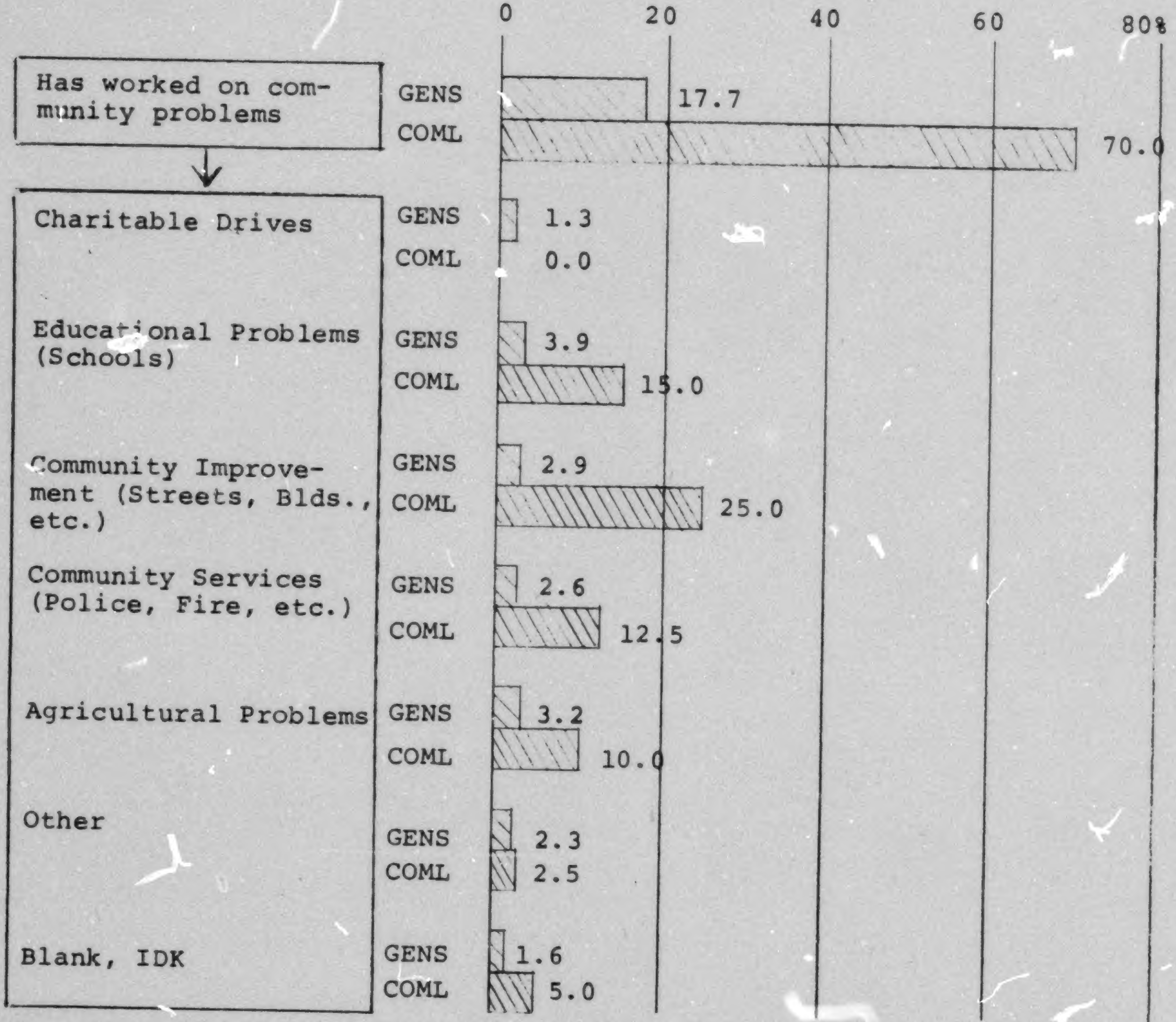


Figure 29. Proportion of general population and community leader samples taking group action or lone action on community problems.

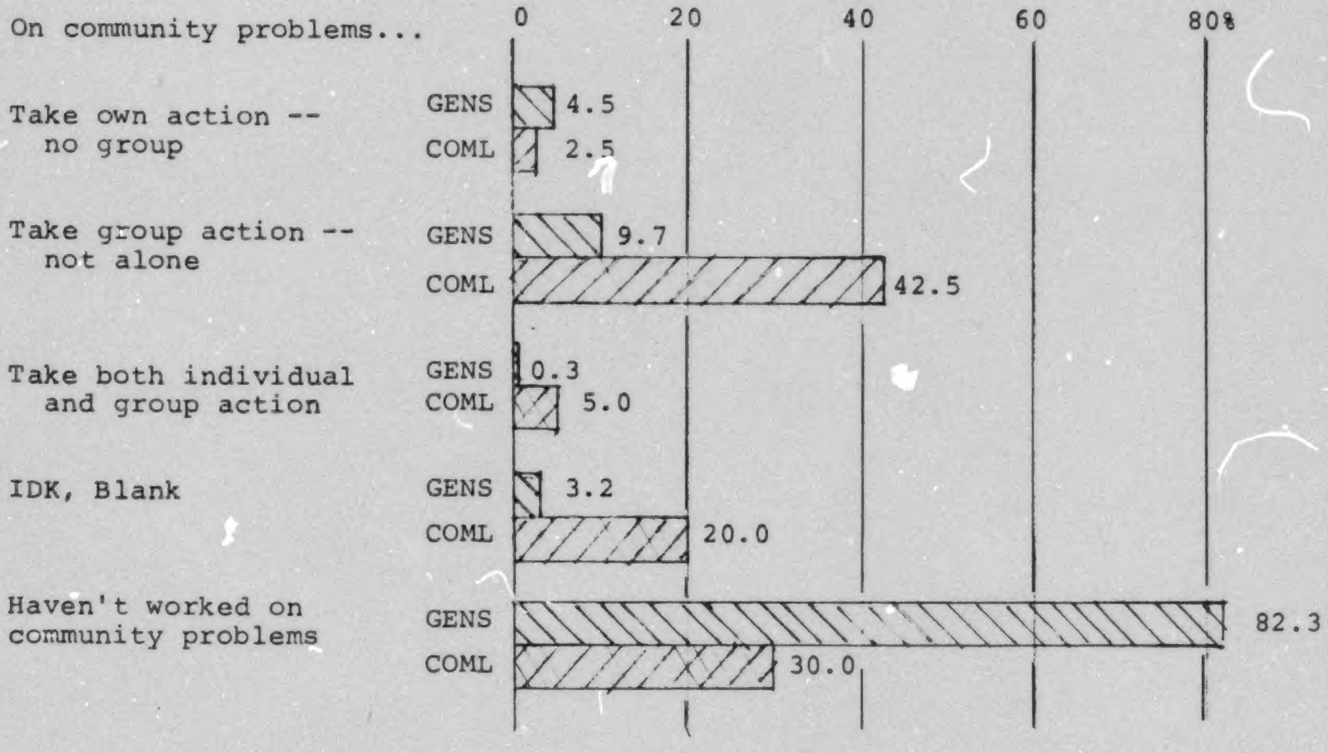


Figure 30. Proportion of community leaders discussing agency information with others, with breakdown by recipient type.

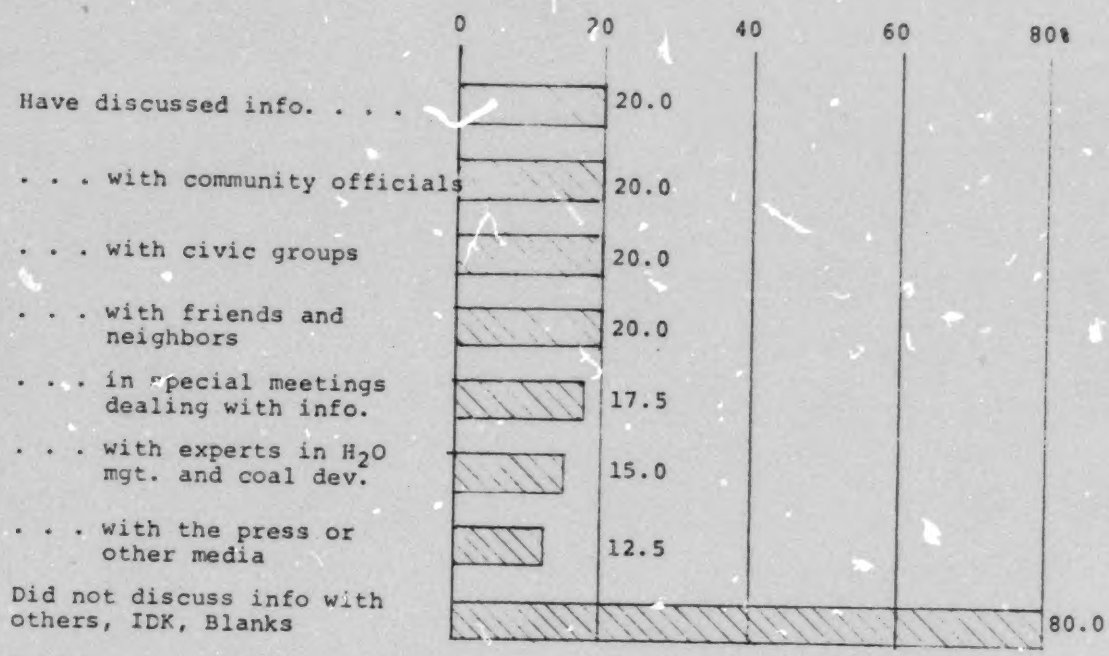
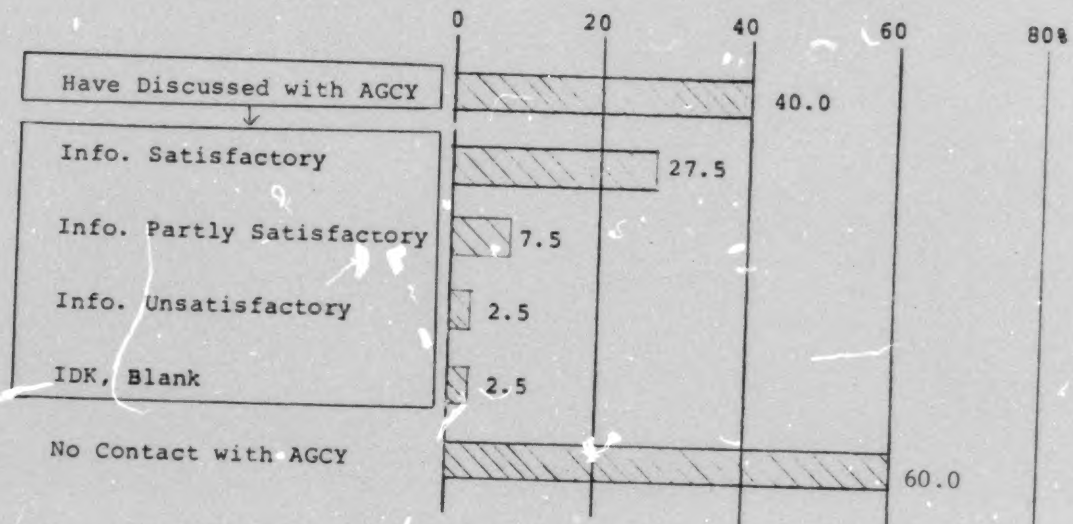


Figure 31. Proportion of community leaders discussing specifically problems of water management and coal development with agency officials during previous year (8/72 to 9/73) and satisfaction with information received.



contacted agencies (60 per cent in the past year), had not discussed agency information with others in the community. The 20 per cent who did were quite vocal, diffusing what they had learned through a number of channels (see figure 30). Most of the activity was confined to community groups and friends, with noticeably less activity spent in passing on the information to experts (for checking) or to the news media (for a wider audience).

Contact with agencies specifically on problems of water management and coal development was limited to 40 per cent of community leaders (in contrast to 60 per cent who had contacted agencies regardless of topic). Of these, a majority were satisfied with the information received, with only a trace (2.5%) expressing dissatisfaction with the contact (see figure 31). These findings underscore the importance of coal and water development to the leaders of the region (two-thirds of agency contacts concerned these matters), together with a generally satisfactory evaluation of agency efforts at meeting these information needs.

The same proportion of leaders (40 per cent) also had been in contact with commercial interests developing the resources of the region. As the data in figure 32 show, the greatest proportion of contacts were to ask about commercial plans for development and receiving information, while somewhat less attention was spent in relaying public opinion to the commercial concern. At least among the minority of leaders contacting agencies, the reasons for contact seem generally well balanced across a range of topics. Given the necessity to limit questions on firms in this study (there simply wasn't the interview time available), we were unable to pursue the role of commercial interests more, despite its importance. It would be risky, on the basis of previous discussion, to conclude that the balanced interchange between leaders and

Figure 32. Percent community leader contact with coal development firms operating in the West River area by purpose of contact.

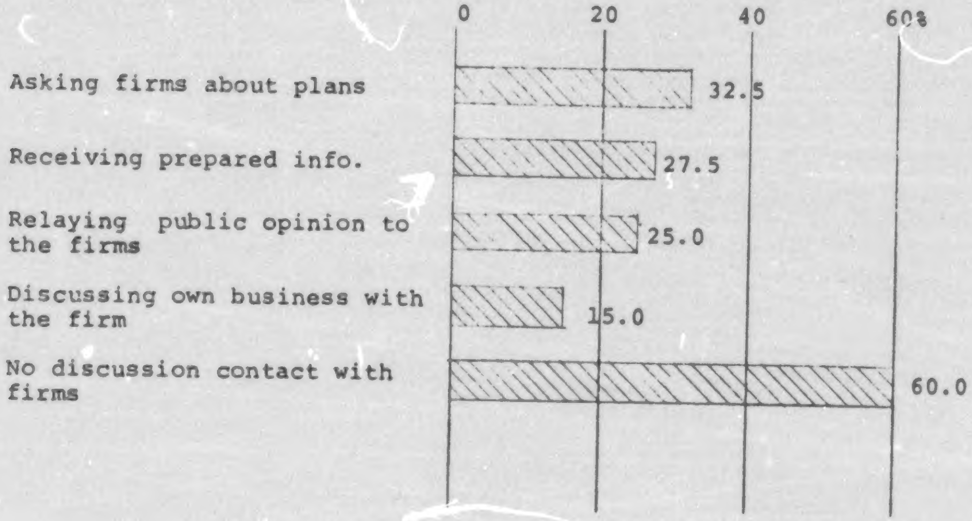
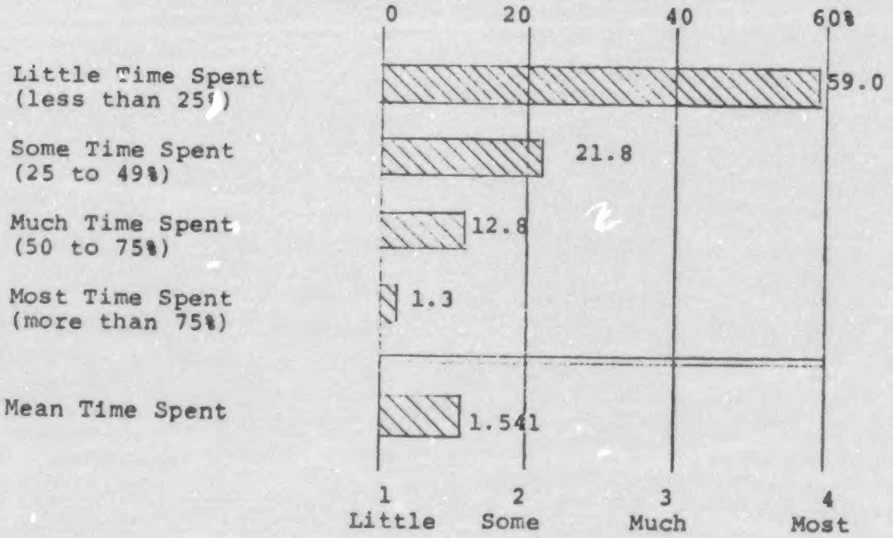


Figure 33. Time agency respondent spends with public relations/ communication activity.



commercial concerns is readily extended to good public awareness of commercial plans or that commercial organizations are well aware of public opinion on development. Certainly the issue deserves more inquiry.

Agencies and Information Channels:

Most agency respondents to our study spent less than half of their time in public information activities, with the majority spending less than quarter-time. This is not unusual, for the agencies in our sample are chiefly involved in engineering and researching development potentials. Indeed, the involvement of better than 40 per cent of the agency sample in public information activities for better than a quarter of their working day represents a sizeable manpower and financial commitment (figure 33).

The preference by agency people for community leaders ("local officials") as a means to communicate to the public is clear from figure 34. Other methods, except the use of "other agencies", are evenly split among news media, higher-ups in the organization ("supervisors") and the arranging of public meetings. However, this pattern hardly matches what agency people see as the most effective means of communicating with the public. The data in figure 35 show a preference for personal contact (not just with leaders) direct mail and the media. The use of formal meetings and reliance on supervisors to spread the word receives far less (none for "supervisors") emphasis. The question to be pondered by the reader and particularly the agencies is why does this gap between practice and what is seen as best for public information performance exist? There is little cost advantage, it seems, in one pattern over the other, ignoring the increased time expense of more personal contact with the public. On this last point, it seems there would be little added problem in simply better diversifying personal contact from leaders to include a wider

Figure 34 . Usual method used by agency personnel to disseminate project information to the public.

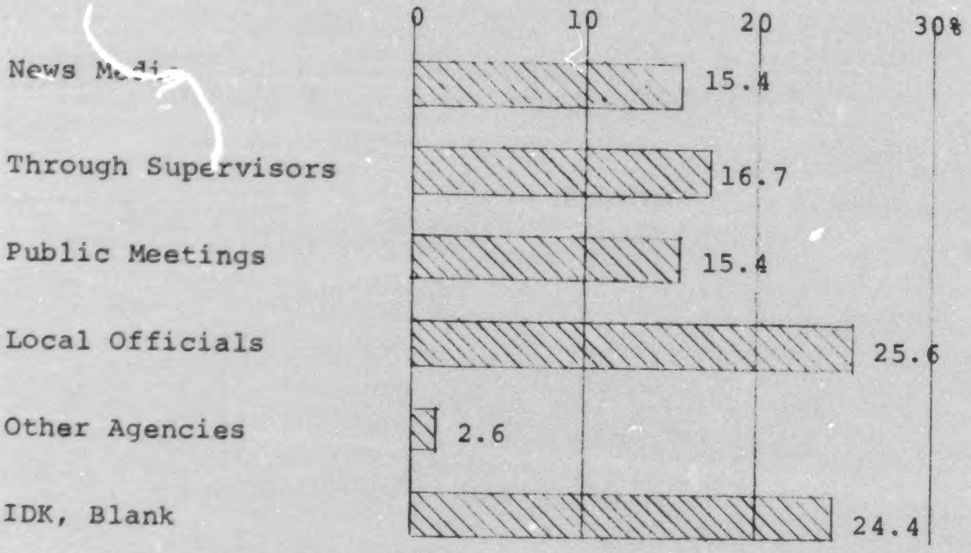
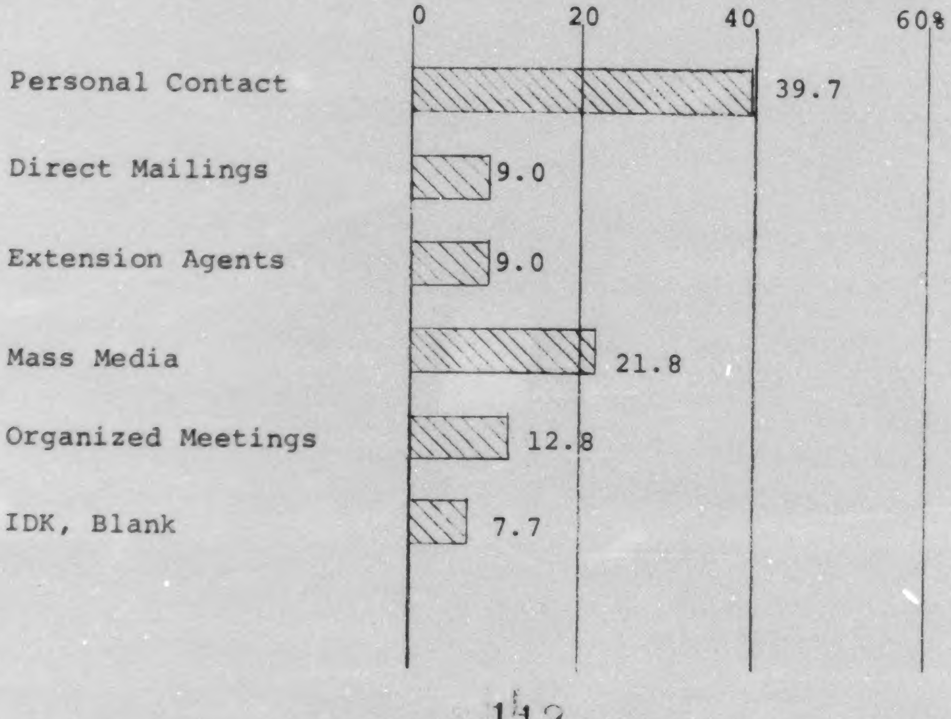


Figure 35. Agency perception of most effective means to communicate development information to public



cross-section of the public, maintaining the same proportion of staff involvement with little cost increase.

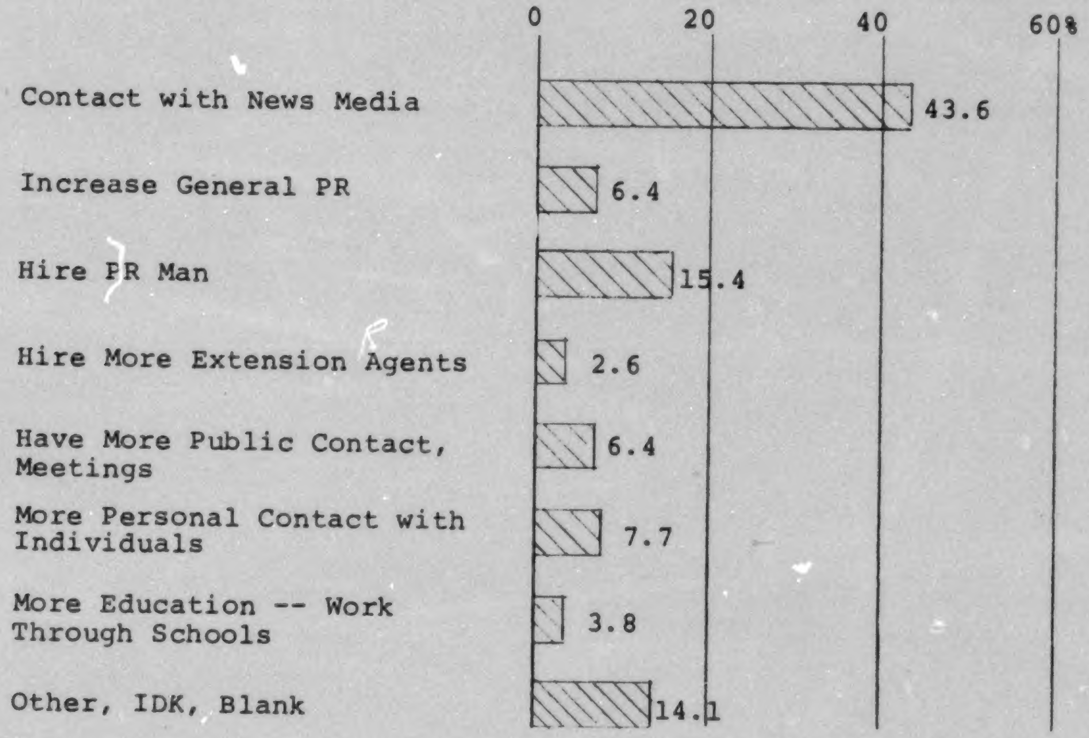
To their credit, agencies were not lacking for suggestions to improve their public information, given added time and money. Should these hard-to-attain conditions come to pass, most agency respondents would like to spend more time with the news media (see figure 35) or simply give the public information tasks over to a professional PR man. Somewhat inconsistent with previous recommendations on most effective methods, only 7.7 per cent would spend the time/money on personal contact with the public.

It's hard to argue with agency recommendations for improving their information programs, except to point out the inconsistencies between what they do and what they feel is most effective, or between what is most effective in their thinking and what they would spend time and money on if they had it. Moreover, it should be emphasized that personal contact should go beyond community leaders, given the far less-than-perfect performance of this group as information brokers. Finally, agency personnel would be well advised to study thoroughly the sources most used by leaders and the public discussed earlier in this chapter.

Satisfaction with Agencies and Firms as Information Sources

To a degree, usage of information sources discussed earlier defines satisfaction, given interest in the problem on which information is sought. Yet, use is also a function of simply the best of what's available, no matter how bad. When asked to evaluate information on the West River Diversion Project available from agencies, few of the public or community leaders were able to respond definitively at all. For the general population this might be understandable given their low contact with agency officials, but only

Figure 36. Agency specification of desireable additional PR efforts on their part, given necessary time and money.



half (20%) of community leaders contacting the agency on water and resource development issues (some 40 per cent of the total leader sample) were able to make up their minds (figure 37). In short, there seem few criteria readily in mind among the public and leaders to gauge the quality of the information from agencies.

Agencies, when asked to evaluate their own efforts, were less reluctant to decide. On the average, agencies thought they were performing somewhere between "good" and "fair" in their public information efforts. Few, as shown in figure 38, saw themselves as doing a "poor" or "very poor" job.

Finally, we asked community leaders to rate the information they received from commercial interests developing West River resources. Results here showed general if not total satisfaction with what the firms had to offer (see figure 39). As mentioned above, however, given our short consideration of firms, more needs to be known, before we can have a stable impression of their public information efforts. At least, however, they seem to be satisfying a limited clientele of community leaders.

Community Leader Information Needs on Coal Development:

We asked community leaders to rank several categories of information which we determined through pre-testing to be highly relevant to coal development. The results, in figure 40, show the dominance of information on coal produced pollution and the effects of mining on the land. Legal questions on coal and the magnitude of the development projects planned were distinctly less vital to the leaders. Population pressures and crowding potential was of intermediate importance. The disturbing findings in figure 41 indicate that in most categories, over 70 per cent of leaders believed information to be inadequate. Only in the instance of "pollution" did the level of satisfaction rise

Figure 37 . Satisfaction with answers to questions on West River Diversion Project (WRDP) for general sample (GENS) respondents and community leaders (COML).

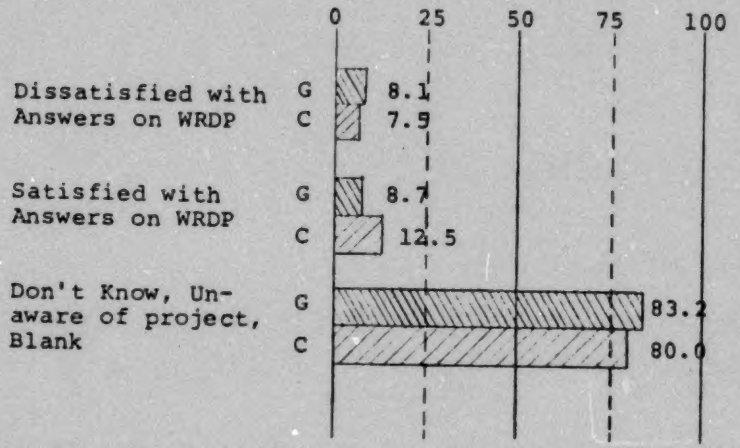


Figure 38 . Agencies' evaluation of own public relations efforts.

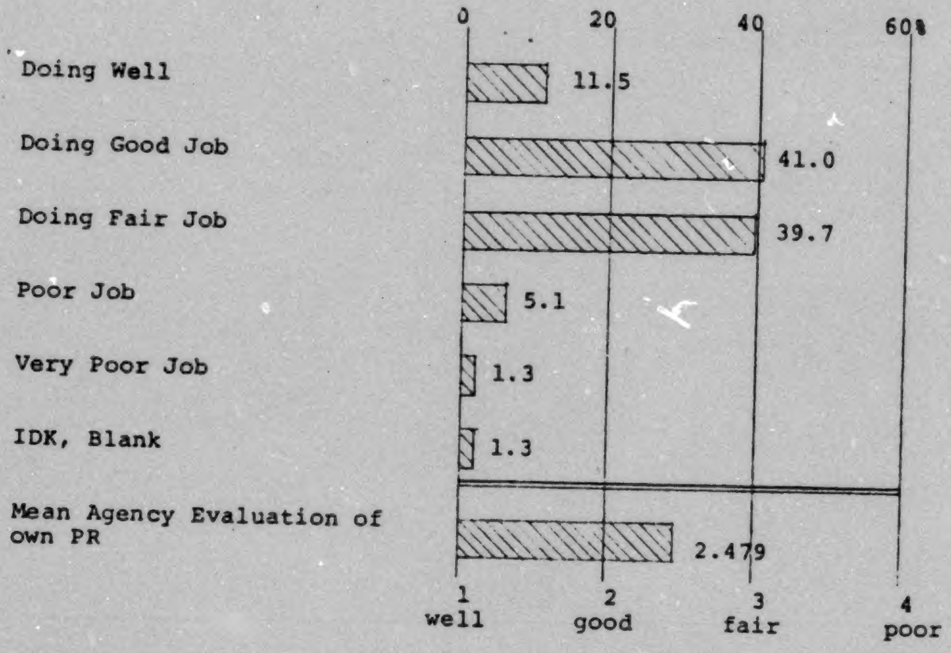


Figure 39. Community leader evaluation of firm information by evaluation category and mean rating.

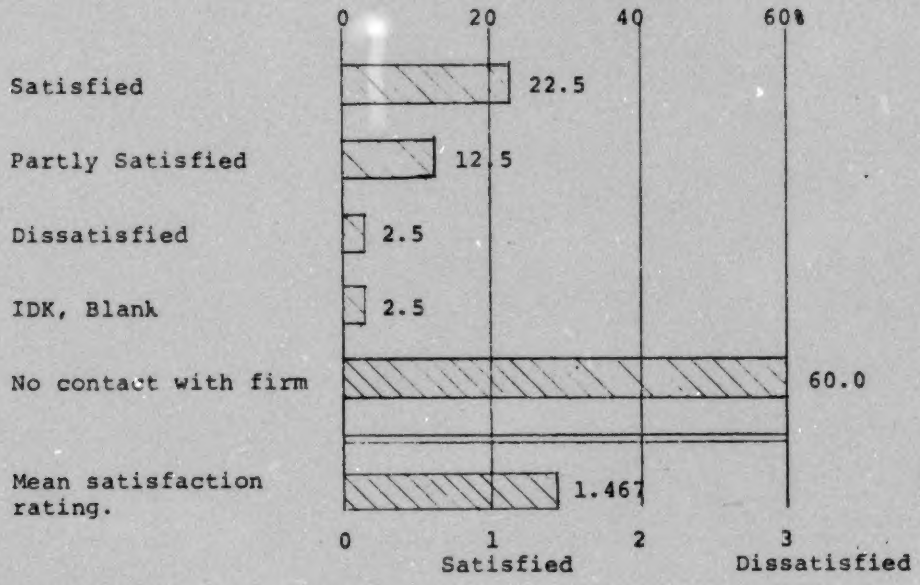


Figure 40. Mean ranking by community leaders of information needs in five coal development topic areas.

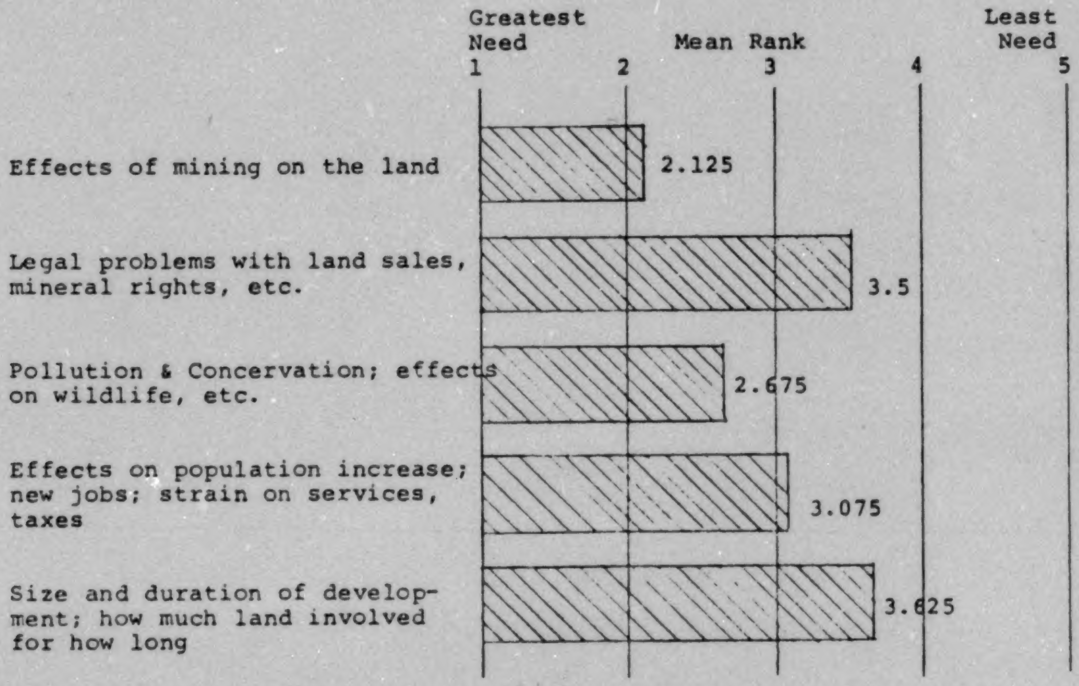
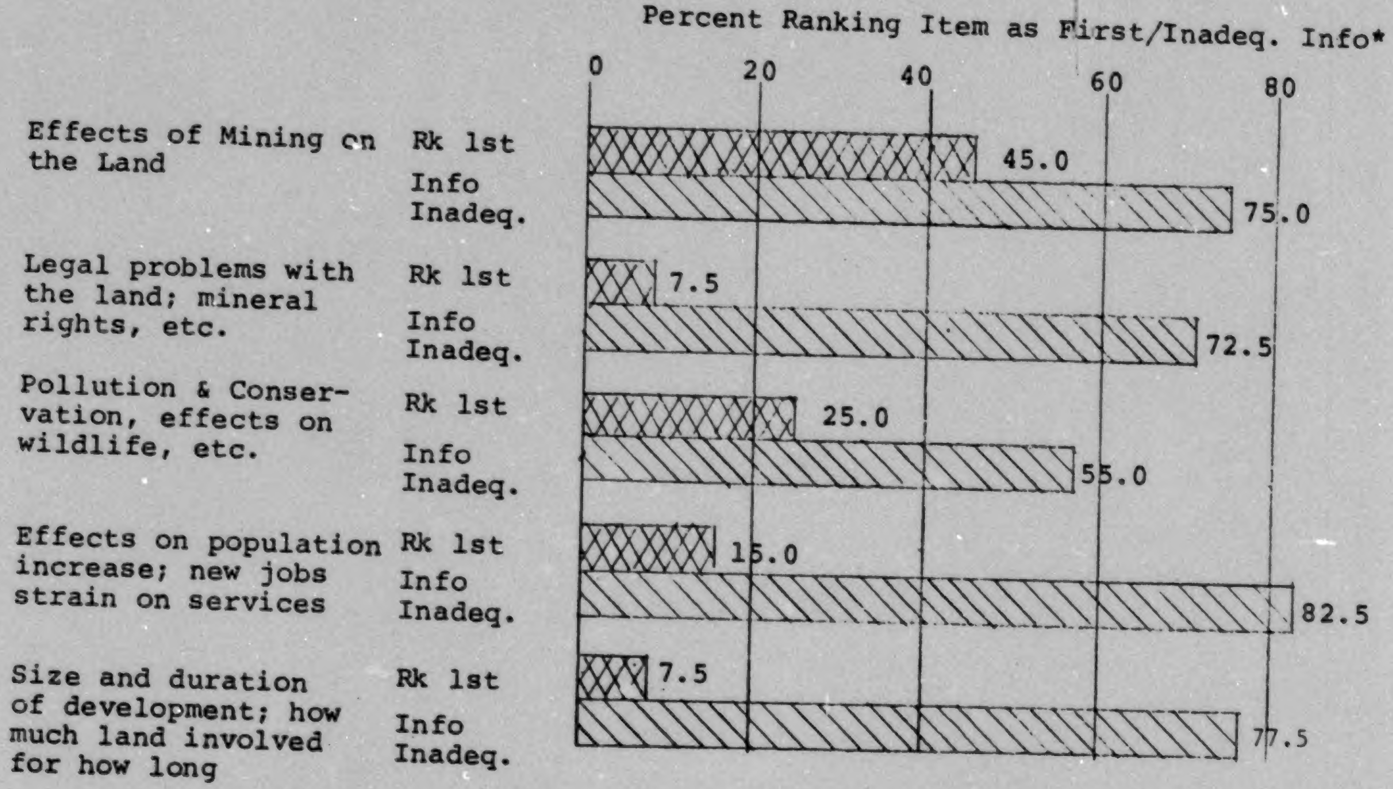


Figure 41. Percent community leaders ranking information need topics as first and information available as inadequate



*No blanks, IDK

to a mere 45 per cent of leaders. Given the intersection of importance and proportion believing information to be inadequate, the first priority by agencies should be to improve awareness on mining effects on land, followed (in order) by population pressures and crowding, pollution, legal problems, and magnitude of the development. Agencies should expect that information needs are more acute among the general population, probably with the same topics emphasized. The public, after all, lacks the contact enjoyed by leaders with expert sources and government officials able to supply some of these answers.

Summary

1. Information from agencies tends to diffuse indirectly - few of the general public go directly to the agency for information. If, as our data indicate, agency people themselves see personal contact with the public as a "best" way to relate their information, then agencies have considerable work to do to expand direct contact to match aspirations for its potential.
2. Community leaders have a different use pattern for information sources, placing most reliance (compared to the public) on personal contacts, not the newspapers preferred by the public. These differences should be considered in agency public information strategy. Leaders also tend to contact agencies with much greater frequency than the general public.
3. Individuals seeing negative consequences to West River development came to these conclusions through use of essentially the same pattern of information sources as those only favoring the project. However, those believing their job would be affected by the project were more reliant on agency and formal sources for information. Agencies should be alert to this job concern among those making direct contact with them.

4. Newspapers - local for the public and out-of-town for the leaders - were the only media showing a significant relation to increased awareness of West River Diversion. Agencies (and non-print media) might do well to plan and improve their information reporting strategy and effectiveness in this light. Media have little effect on increasing relevance of the project for respondents.
5. Participation in interest groups was, from a field of possibilities, only associated strongly with the relevance respondents believed West River Diversion would have for their jobs. Again, agencies and others in public information roles should be particularly sensitive to job effects of the project.
6. Community leaders, while exhibiting a fair level of awareness and information seeking on West River Diversion, were not very active in passing the information along to the public. Agencies should not become over-reliant on community leaders to spread information under present circumstances.
7. Agencies should examine carefully differences between their present methods of enhancing public information against what they believe to be "best" methods and adjust their policies accordingly, if necessary.
8. Agencies, state officials and commercial development interests should pay swift heed to the information needs expressed by community leaders on coal energy development in the West River region, especially those dealing with mining effects on land, effects of population increases, and pollution.

9. Group or "collective" involvement was quite low at "informal" levels. Less than 20 per cent of the public and leaders knew of others who shared their feelings on West River Diversion. Less than 3 per cent were involved in groups taking action toward the project. Involvement of leaders in "community problems" generally was strong (70 per cent), but much weaker (18 per cent) for the general public.

REGIONAL DEVELOPMENT AND LIFESTYLE CHANGE

The widespread change that is certain to accompany rapid development of energy resources in the West River seems likely to profoundly affect two lifestyles of people living in this area. It is not within the scope of this study to try to anticipate the social (and perhaps psychological) consequences of adjustment to new and different lifestyles. However, we did attempt to assess people's "readiness to change" in a couple different ways. First, we asked about their satisfaction over the years in the quality of life in the area. Second, we asked how strongly they felt about continuing to live there. Those items represent only a skeletal attempt to measure affection for a region, but it may provide a valuable benchmark to compare against the results of later studies.

Rating the quality of life is an elusive question to ask, much less answer. Our basic approach was to ask people to mark a scale ranging from "best possible" to "worst possible" living conditions for three time periods - 10 years ago, today (about 8/73) and 10 years from today - and to chart the trends for community leaders and the public. The trends for the two groups were opposite: leaders saw life improving over the 20-year span charted, while general sample respondents saw it becoming worse (see figure 42). Trends aside, over-all, the public saw their situation as poorer than the leaders', tending toward the "worse" end of the scale. Given the concentration of local government officials and, by local standards, "big" businessmen in the leader group, this optimism should, perhaps, be expected. Certainly, however, the divergence of the two trends indicates the leaders may have problems empathizing with the concerns of their public.

Could the promise of coal development be responsible for the pessimism among the public? The relationship shown in table 22 suggests that it is a contributing cause, although unlikely a complete explanation. What too, of the few saying they would change jobs if coal development came? Would they change to "better" jobs in their view or be forced by changing conditions to take a coal related job? The high proportion of potential job changers seeing coal development as an advantage indicates the former (table 23). Indeed, given the strength of this relationship, the promise of a new job may be the major reason for project support among a small number of respondents.

Finally, respondents were asked a series of questions to measure the strength of their attachment to the West River region. The "agree" to "strongly agree" findings in figure 43 indicate an abiding satisfaction with the region among our respondents, regardless of whether they were community leaders or not. Agencies and interests developing the resources of this region must take strong note of these feelings in considering steps which might substantially alter the lifestyle of the area. The results of figure 42 discussed above should caution agencies that people are apprehensive about future living conditions in the region.

Basic Sample Characteristics

It was not our primary intent to characterize the residents of the region demographically, since those data tell us little of their attitudes toward development and the quality of information they exchange concerning it. The random procedures used to select respondents in this study assure, within the laws of chance, that our samples are representative of the population of the Knife River Basin and characteristic of the West River region generally. However, comparison of some basic characteristics among the public, leaders

Figure 42. Mean optimism on family living conditions in West River area for general population and community leader samples.

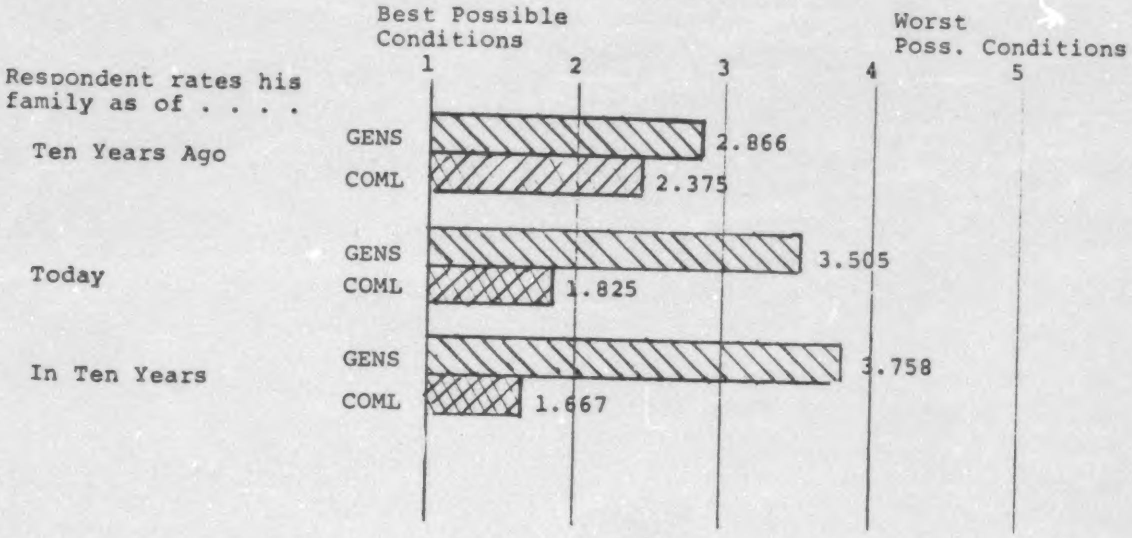


Figure 43. Mean response for general population and community leaders to three questions asking preference and desire to live in the West River region.

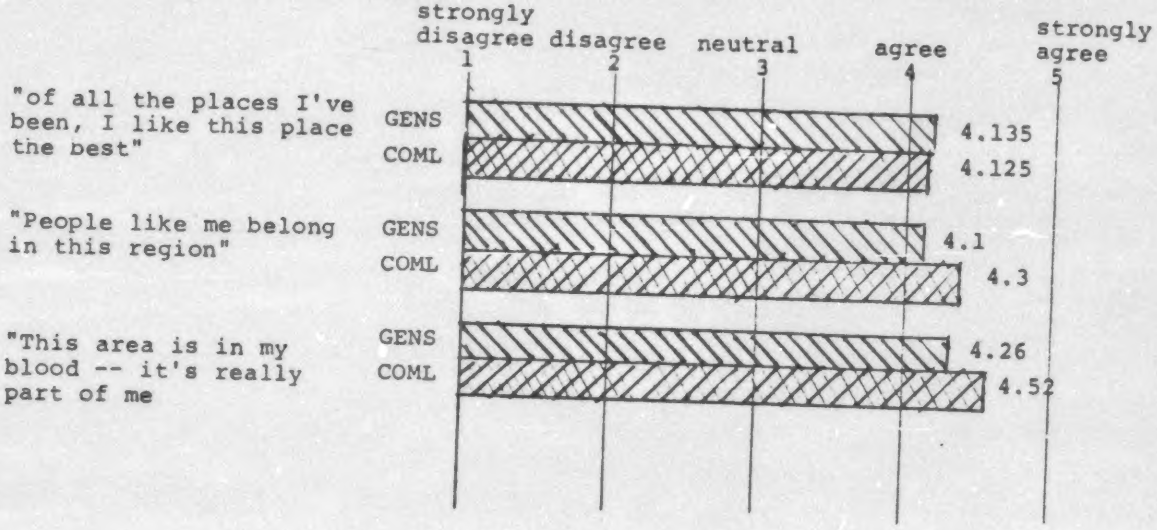


Table 22. Respondent's perception of coal development by optimism for West River Region in ten years. Data for general population only.

Perception of Coal Development	Living in Area in 10 Years will be....		
	Best	Moderate	Worst
Mostly Advantage	60.0	64.8	46.04
Mostly Disadvantage	40.0	35.2	53.96
n	(25)	(54)	(139)

X^2=6.184, df=2, Sig. = .05
Kendall's Tau .1288, Sig. 0022
Gamma .1757

Table 23. Respondent's perception of coal development by effect of coal development on job choice. Data for general population only.

Perception of Coal Development	Job Choice........	
	Change Jobs	Stay With Present Job
Mostly Advantage	88.9	52.7
Mostly Disadvantage	11.1	47.3
n	(18)	(237)

X =7.44, df-1, Sig. .006
Kendall's Tau -.1862, Sig. 001
Gamma -.755

and agency personnel give some insight into the similarities and differences they have from each other (see table 24). The public and the leaders are rather similar to each other, except that leaders have slightly more formal education, are on the average six years older and have not been in their present job quite as long as the public. It is clear from these data that these respondents tend to be life-long residents of the state and have generally been in their present occupation since entering the work force.

Agency personnel, on the other hand, are rather different from the other two groups. They tend to be much younger, college graduates, and, proportionately, fewer are native to the state. They have, on the average, better than fifteen years' experience at their jobs. This profile perhaps is typical of professionals in agencies, yet one which may signal problems of communicating to people with less formal education, greater age, and more time spent in the state pursuing their livelihoods. Agency professionals should be sensitive to the numerous qualities, only a few of which are covered in this analysis, that can separate their life experience from those they serve.

In terms of the respondent's gender, our general population sample was nearly evenly divided between male and female respondent (see figure 44). This was an intentional quota control procedure imposed on our otherwise random methods to guard against the over-inclusion of females - a recurrent problem in surveys since they are more frequently at home and more liable to be interviewed than males. Community leader and agency samples were with few exceptions entirely male.

Table 25 charts the distribution of the general population and community leader samples by locale, an allocation which is roughly proportionate to community or county population based on the 1970 U.S. Census. It was not

Table 24: Mean demographic characteristics for general population, community leader and agency samples.

	GENS	COML	AGCY
Mean years lived in N.D.	43.57	45.98	26.40
Mean years in present job	26.59	23.73	15.30
Mean age of respondent	45.60	51.45	36.34
Mean grade attained in school	10.57	12.64	15.36
n	(310)	(40)	(78)

Figure 44: Sex of respondents in general population, community leader and agency samples.

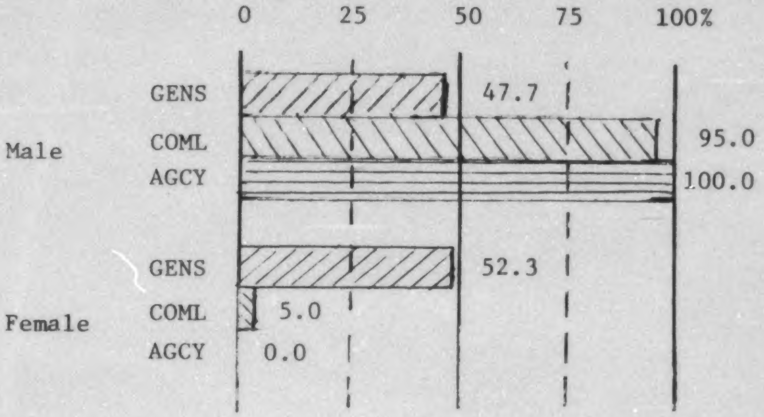


Table 25. Geographical distribution of general population and community leader respondents.

LOCATION	GENS	COML
Incorporated Areas		
Beulah	9.7%	20.0%
Center	4.8	10.0
Dodge	1.3	2.5
Dunn Center	-	2.5
Golden Valley	1.6	2.5
Halliday	3.2	5.0
Hazen	9.3	17.5
Hebron	6.5	15.0
Killdeer	6.4	7.5
Richardton	5.1	12.5
Taylor	1.6	-
Zap	1.9	5.0
TOTAL Incorporated	51.4%	100.0%
Unincorporated Areas		
Billings County	3.2%	- *
Dunn County	15.5	-
Mercer County	9.7	-
Morton County	2.6	-
Oliver County	10.0	-
Stark County	6.5	-
Missing**	1.1	-
TOTAL Unincorporated	48.6	
TOTAL	100.0%	100.0%
n	(310)	(40)

*Location of community leaders, given the nature of lists for sampling available, were recorded by nearest incorporated area. Sample size is too small to allow stable incorporated vs. unincorporated comparisons for this group.

**These data were missing for 3 general sample questionnaires representing unincorporated areas.

possible to separate community leaders between incorporated vs. unincorporated areas owing to the absence of this information in the kinds of lists available for leader selection. In an informal way, we did try to provide a heterogeneous group of leaders representing a mix of commercial, ranching/farming, educational and governmental interests in the region.

Table 26 characterizes the origin of our agency census. Our criterion was to locate people at a supervisory level involved in water and resources development work in the West River region. In satisfying this census, we interviewed both central office and field personnel of the agencies involved. Our over-all rate of response was exceptionally high for mail-in questionnaires, with no agency responding by less than 75 per cent of those eligible to participate. Thus we have some assurance that results are not loaded by any one agency responding in far greater numbers than others and represent a variety of interests in the development of natural resources.

Table 26. Distribution of agency census by agencies. The "eligible" column indicates respondents contacted for participation in the study. "Obtained" respondents, of course, are those who responded to the study.

Agency	Obtained	Eligible	% Completion
N. D. Water Commission	8 (10.3%)	8	100.00%
U. S. Bureau of Reclamation	11 (14.1%)	12	91.6
Soil Conservation Service	30 (38.5%)	36	83.3
N. D. Department of Game and Fish	6 (7.7%)	8	75.0
U. S. Forest Service*	23 (29.5%)	30	76.6
TOTAL	78 (100%)	94	82.97

*Includes 10 members of Dickinson Youth Conservation Corps.

CONCLUSIONS

In a most general sense, the West River Diversion Project and development of this region have not yet become mature issues of public debate. Our findings indicate that this study has occurred during a stage of growing awareness about the project and its implications. It's good in one sense that we're "early", since there is much that can be done to remedy serious problems in public understanding about development of this region. On the other hand, if nothing is done, events likely will move at a faster pace than public awareness of them.

In this section, we will attempt to evaluate in capsule form the status of the three groups comprising the basis of this study. Equally important, we will make recommendations, based on present findings and our experience in similar, past situations, about what can be done with agency policies, the media, leaders and the public directly to alleviate some of the problems we see. Also, we will give some insight into what the limitations of this study are and what can be done next to monitor public attitudes in a way useful to planned development of the West River region.

Given the large numbers unaware at all of the West River Diversion Project, it would be misleading to say that the public and their leaders "approved" of the project. Most simply are unaware of it. And of those aware, a large proportion were unable to make up their mind to approve or disapprove. The minority remaining tended to voice approval. In a related sense, most respondents viewed the kinds of development West River Diversion would bring as "important" to the region. Moreover, though far from a landslide, more people see coal development as an "disadvantage". But interpreting these signs as a "go ahead" with preconceived development plans may well invite later, adverse reaction. In short, people view impending resource development as important, perhaps vital, but don't understand projects and the necessary compromises they entail well enough.

The sharpest group distinctions were apparent between agency personnel and our other two samples - leaders and the public. The latter groups tended to see regional development in simplistic terms, at best identifying a few outcomes, and were generally unable to approve or disapprove of development activities. Leaders, contrary to our initial expectations, proved to be faulty information brokers, offering little increase in public understanding as a result of their efforts. As well, leaders were decidedly more supportive of agencies and their projects than the public.

Agencies were better able to grasp the complexities of development, as perhaps one might expect, but were also better able to estimate the development priorities as seen by leaders and the general public. These organizations were also capable of self-criticism, often taking themselves more to task than the public or leaders were inclined to do. Public support for agencies hinged most strongly on their honesty and availability for advice-giving, while leaders were more concerned with their efficiency. Rural people tended to view agencies somewhat more critically than townfolk. Regrettably, this favorable image is tarnished somewhat by lack of awareness of the West River project among a considerable number of agency employees.

Viewed as a limited information network, our three groups are far from achieving optimum conditions for mutual understanding of development. The groups involved tend to agree on priorities more than they are accurate in judging other stands on them. Given low involvement in interest and action groups, the ineffectiveness of mass media to foster intergroup accuracy, and the failure of community leaders as information brokers, this state of affairs perhaps is to be expected.

These somewhat pessimestic findings probably are not all that atypical of public understanding of comparably complex and recent issues. As we indicated above, the questions of development priorities have yet to mature into widely shared public debate. What separates development of the West River region from others is rapidity with which decisions, however preliminary, are being made on the area's future, the difficulty of describing the technical detail and implications of damage to the public and leaders, and the lack of sophisticated public information and media systems to understandably describe or synthesize development alternatives. In short, we fear that unless there are decided changes in the public information effort, the public and perhaps their leaders may be increasingly "left behind" as the tempo of development and its complexity accelerate.

What changes and cautions then do we prescribe for present circumstances? Admittedly the precision of our suggestions won't match that in our description of the problems, but we believe we have some practical ideas to improve matters:

1. Hearings designed to secure public approval of final plans on West River region development would be, in our judgment, quite premature, given the lack of awareness and involvement in the issues involved. Before this stage is achieved, considerable education of the public and leaders is necessary.

2. Agencies should concentrate their efforts on direct public contact. Reliance on community leaders to disseminate information and gauge public opinion may result in inaccuracy and inefficiency.

3. Major agencies involved in West River development need to collectively or individually employ public information specialists skilled in technical writing whose sole concern would be development of the West River region. Moreover, this individual should be stationed in the region, perhaps at Beulah or Dickinson; not at offices in Bismarck. In this way, the specialist would become more attuned, we feel, to the mood, information needs and technical sophistication among citizens of this area.

4. Citizen meetings concerning West River Development should be encouraged and supported on a much wider, perhaps less formal basis than presently.

Citizen advisory committees currently engaged with the West River Diversion project do their job well, but tend to represent major interest groups in the region. This leaves out a wide slice of the public not strongly allied with any particular group and places a heavy burden on interest group (community) leaders to do public information work they are not that well equipped to do. Meetings sponsored by the state for example could be held on a traveling basis in communities throughout the West River area, with special encouragement offered citizens outside of leadership positions to attend.

5. The media need be better coordinated and involved in collective effort to adequately report development information. Vehicles for this coordination could be the wire service, the collectively employed information specialist noted in (2) above, university journalism departments and/or in-state television and radio networks. Special effort will be needed to coordinate media activity in the immediate area of development as resources seem smallest there. The combination of media dispensed information together with local discussion group activity has been useful in many similar development situations and could be attemped in North Dakota. A program of this type exists in the State of Washington ("Alternatives for Washington") to foster citizen participation in decision making. Techniques ranging from radio "talk" shows to bus posters and neighborhood meetings are used to encourage involvement. A similar effort for North Dakota could be beneficial.

6. An effort needs to be made to move away from "reaction" planning, where citizens are asked to select from several development alternatives the desired route, to "input" planning where citizens formulate objectives and the alternatives themselves. Admittedly, this may be a difficult process, but some opportunity should be offered to citizens to structure development alternatives with a minimum of expert help.

7. What emphasis should be made and what are some stylistic characteristics which will maximize message effectiveness among the public? There are no sure-fire answers, but several points seem clear on the basis of our study:

   a. People are concerned about the effects of West River Development on their personal lives. What will coal development do to their lifestyle, for example? Will living conditions become more crowded? Will better and more lucrative jobs be available, and, if so, to what kinds of people? The point is that complex engineering data, economic forecasts and population shifts should be translated into personal terms as best as possible, without committing gross over-simplifications or without passing-off possibilities as certainty.

   b. Due notice should be given to inconsistencies in public and agency goals. For example, both groups, but particularly the public, desire additional jobs, but are not as enthusiastic about bringing in the heavy industry which can supply those jobs. In short, the trade-offs and compromises necessary in attaining development goals should be well-publicized. Costs as well as development benefits must be well understood.

c. Agencies and other groups promoting development should foster a discussion of options rather than alternatives for the region. They must avoid presenting a choice to the public comprised of a limited number of inflexible alternatives. It may be a disservice to find that the *status quo* of the region is very much a "problem" and that a way out is provided only by a limited number of drastic "solutions". In short, the advantages of the region as it stands should not be overlooked or negated in a rush to solve "problems".

8. Existing impact estimates of West River Development have circulated mainly among a relatively small group of leaders, planners and state officials. More needs to be done to make these findings available to the public in non-technical terms. A sustained effort is needed here, going well beyond the occasional feature report in the state's larger newspapers.

9. Representative sampling of West River residents needs to be done on a continuing basis to check the status of public opinion and understanding. Not only would a sustained effort of this kind provide one means of feedback to development agencies and planners, but also would provide public information specialists with sorely needed guidance on adapting their skills to public needs. If properly combined with other means of citizen participation in planning and decision-making such procedures may ensure that the setting of development priorities and means to fulfillment are based among the public, not entirely agencies and special interest factions.

10. Research on the impacts of development needs to be coordinated better on a regional basis. The advantages accruing to North Dakota as a result of resource development may not, for example, be shared by other states who may in turn suffer some of the costs (e.g., changes in water quality and and amount). Also, resource development in out-of-state areas similar to the West River region where resource development is more established, would be a source of useful data to predict social impacts.

11. Research on development of natural resources should be coordinated and centralized by a disinterested agency. In completing our study, we have noted with some apprehension the growth of parallel efforts, some funded by special interest groups, others by agencies and firms desiring to develop the region. Many, perhaps most, we have had close knowledge of are conscientiously planned and carried out. The problem is lack of coordination, some redundancy of effort and, rarely, incompetent work which spoils public cooperation with legitimate social impact survey efforts. Moreover, there is the difficult question of conflict of interest raised by some studies commissioned and monitored by those who are evaluated by the work. A disinterested agency, answerable to the legislature and citizens, setup with the charge of funding and monitoring impact studies would alleviate much of this problem. Financing likely could derive from the state budget and levies against firms petitioning for resource development in the state.

No single study can do justice to all the complex and vital issues of attitudes and public information needs posed by West River development. Our study is no exception, as the list above partly suggests and the one below discusses in detail. Beyond cautioning the reader against over-interpretation of present findings, understanding the gaps in this present study specifies pretty much what we feel our next research steps to be.

1. Expansion of the survey area and sample size in North Dakota: While we believe the Knife River basin to be representative of opinion in the West River region generally, certain comparisons such as between the "city" climate of Dickinson and rural areas can't be made with present data. Moreover, statistically stable contrasts between localities experiencing coal and power generation development and those not cannot be made based on present sample size. Too, contrasting areas based on variant types of past water management projects suffers the same fate.

2. Increased emphasis on coal and heavy industrial development: Our present study was concerned largely with the implications of one project - West River Diversion. While we considered energy related developments as quite important, attention during our limited interview time, was shared over a number of concerns. More specific attention needs to be given energy development questions.

3. Longitudinal analysis: As alluded to in a previous discussion, surveying public attitudes should be a recurrent process. As development progresses, people's attitudes, problems and information needs will also change. Our present data "freezes" one's picture of the region at an early stage of appraising development issues. Given the fast pace of planning for the region, public opinion and needs likely have altered somewhat since August-November 1973 when these data were collected. The extent of these possible shifts should be estimated on a continuing basis.

4. Extension of the survey to resource development firms and county agencies: The intent and attitudes of commercial interests not considered in our analysis, particularly those based outside of the West River area, represent important forces in development of the region. Sharing that status are county level planning agencies which also are influential in planning West River regional growth. The present study does not represent these groups except through individuals who might have been randomly selected into our community leader or general population samples.

5. Assessment of media performance and information strategies: One of our most pressing aims is to check media content directly to better explain its generally poor performance in creating awareness and collating opinion on West River development. Hopefully as an outcome of such activity, we could make more definite suggestions than those above to improve the performance of the media in this area.

Clearly, our strongest hope with these studies is that they provide useful criteria for setting development policy and informed public participation in that decision-making process. Moreover, we have tried to break with a tradition of "social impact" studies which either focus on demographic variables or on simply "pro" vs. "con" attitudes on development. With a communication-based approach, we have attempted to provide a conceptually sound predictive base for estimating public understanding and satisfaction with the outcomes of regional development. More immediately, the study offers suggestions for present policy which we hope will arouse responsive action.

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APPENDIX A

This appendix contains fascimile copies of our questionnaires. Two are reproduced: the community leader and the agency instruments. The general population received a questionnaire identical to the community leaders, except that several items were deleted. These are items: 13a, 16, 18a, 19a through 19d, 20, 20a, 20b, 21 and 26a.

Major differences occur between the community leader and agency instruments, largely because the agency questionnaire was mailed out and was designed for self-administration. The other two questionnaires were administered by an interviewer who filled-in responses for the respondent.

The general sample questionnaire consumed about 55 minutes of interview time, the community leader instrument about 65 minutes and the agency mail-in questionnaire took about 25 minutes for a respondent to fully complete.

Community Leaders

Location____________________

____

WEST RIVER AREA SURVEY

University of North
Dakota Communication
Research Center and
The N.D. State Water
Commission

Project # 800 (1-3)
Deck # 01 (4-5)
SUBJECT # ______ (6-8)
Card # 01 (9-10)

I'm __________________ representing several state agencies. We're asking people in this area their reactions to and ideas about water control and other changes planned for this part of the state. Also, we want to find out how people feel about the agencies responsible for these plans.

IF RESPONDENT NOT HEAD OF THE HOUSEHOLD

I'd like to talk to the man or woman of the house.

IF RESPONDENT OK

IF NOT AVAILABLE, SAY:

Is there a time I could talk to this person during the week?

IF YES: RECORD CALL BACK TIME, DATE HERE.

Callback: ______________

IF NO: Thank the respondent and proceed to next household.

The State Water Commission and the Communication Research Center at the University of North Dakota are sponsoring this survey. Our results will help the state and citizen's groups to plan for the future. Your answers will be confidential--only the general feelings of all the people in this area taken together will be reported. There are no right or wrong answers--we just want people's honest opinions.

INTERVIEWERS NOTE--A VERY FEW RESPONDENTS MAY INDICATE THAT THEY HAVE COMPLETED A QUESTIONNAIRE MUCH LIKE THIS ONE IN THE PAST SEVERAL MONTHS. DO A LITTLE QUESTIONING TO FIND OUT IF IT WAS THE WEST RIVER AREA SURVEY SPONSORED BY THE STATE WATER COMMISSION AND UND. IF SO, THANK THE RESPONDENT AND CONTINUE TO THE NEXT INTERVIEW. PLEASE MAKE A RECORD OF THIS INSTANCE, IF IT OCCURS, AND REPORT IT TO THE FIELD SUPERVISOR.

1. First, about how many times in the past year have you been contacted by--or have gotten in touch with--an extension agent, someone from the soil conservation service or a representative from the Bureau of Reclamation?

....none ____ :1 (11)
....once or twice ____ :2
....three to six times ____ :3
....seven to twelve times ____ :4
....more than twelve times ____ :5
....IDK ____ :0

2. Agencies such as the State Water Commission, the Bureau of Reclamation and the Soil Conservation Service have drawn up plans to improve water supply and control in this region. Are you familiar with any of their recent programs, say, in the past two years?

No____ :1 Yes____ :2 (12)

IF YES...

Which of these programs do you recall? LIST

____

____

____

(13-14/15-16/17-18)

3. Do you feel agencies responsible for water management and regional development listen to public opinion? Do . . . . .

____they all listen :1 ____IDK :0 (19)
____most of them listen :2
____some of them listen :3
____a few of them listen :4
____none of them listen :5

Can you recall which agencies don't seem to listen as much as they should?

____

____

____

(20/21/22/23)

4. In general, how would you rate the past performance of agencies in carrying out water control projects in this region in the past? Would you say their performance has been . . . . .

Don't Know_____ :0

....very good _____ :1 (24)
....good _____ :2
....fair _____ :3
....poor _____ :4
....very poor _____ :5

Why do you rate them that way?

____

____

____
(25/26/27)

5. We're interested what major problems, if any, you see in this region. Think a minute and tell me what major problems or challenges you think face this area in the future.

No Problems_____

Yes, Problems_____

IF PROBLEMS, ASK R TO NAME SPECIFIC ONES. LIST THEM IN ORDER IN THE TABLE BELOW. FOR EACH PROBLEM, ASK HOW FAST IT SHOULD BE ACTED ON.

LIST PROBLEM	...acted on immediately (now to 1 yr)	...put off awhile (1 to 3 yr)	...put off a long time (3 or more)	don't know	
(28-29)					(30)
(31-32)					(33)
(34-35)					(36)
(37-38)					(39)
	:1	:2	:3	:0	

6. Many agencies deal with regional problems and development. Let me repeat the list of problems you gave me. For each problem, which agencies, if any, are best able to help solve it?

REPEAT THE LIST GIVEN IN #1, FILLING IN FOR EACH OF THE AGENCIES RECOMMENDED BY R.

Which agencies are best equipped to deal with . . . . .

the first problem	(40/41)
the second problem	(42/43)
the third problem	(44/45)
the fourth problem	(46/47)

7. The State Water Commission together with several other agencies is developing an extensive water control plan for the Knife River Basin. Have you heard about the project?

_____No :1 _____Yes :2 (48)

TO ITEM # 8

Where, or from whom, did you first hear about the project?

____

____
(49-50)

LIST. IF R GIVES A NAME, ASK WHO THE PERSON IS (A RELATIVE, FRIEND, ETC.) AND WHAT HE DOES (A FARMER, EXTENSION AGENT, ETC.)

Since first hearing about it, have you received any more information about the project?

_____No :1 _____Yes :2 (51)

(a) Where did you get this additional information?

____

____
(52-53/54-55)

(b) Have all your questions about the project been adequately answered?

_____No :1 _____Yes :2 (56)

(c) Tell me, what major questions do you still have on the project?

____

____
(57-58/59-60/61-62)

(d) If you were to advise state agencies on this project, what reasons would you give them for going ahead with their plans?

______

______

______

______ (63/64/65)

PROBE FOR LIST

(e) What reasons would you give them for changing their plans or dropping them?

______

______

______ (66/67/68)

PROBE FOR LIST

(f) Do you believe the agency sees the same benefits and disadvantages as you?

____Yes :2 ____No :1 (69)

What benefits does it see that you don't?

______

______ (70-71/72-73/74-75)

What disadvantages do you see that they don't?

CARD 2
IDENTIFICA-
TION COLS
1-10

______

______ (76-77/78-79/11-12)

(g) Weighing the likely benefits and costs against one another, would you be . . . . .

____strongly in favor of such a project :1 (13)

____in favor of such a project :2

____neutral on the issue :3

____opposed to such a project :4

____strongly opposed to such a project :5 ____IDK :0

(h) Do you think this project will have any effect on your job?

____No :1 ____Yes :2 ____IDK :0 (14)

IF YES

In what ways . . . . .

______

______

______ (15/16/17)

PROBE FOR LIST

(i) In connection with the plan for the Knife River Basin, are there any groups or individuals you think of as sharing your feeling about the plan?

____No :1 ____Yes :2 IF YES (15)

______

______

______ (19/20/21)

PROBE FOR LIST

(j) Also, in connection with this plan, are you involved with any groups that are taking definite action either supporting or opposing this project?

____No :1 ____Yes :2 IF YES Which groups are they? (22)

______

______

______ (23/24/25)

PROBE FOR NAMES OF ORGANIZATIONS

8. In the past some people have disagreed with water projects started by these agencies, others have supported them. How do you feel, considering the projects you remember being done by these agencies?

Do you . . . . .

Always support these agencies ____ :5 (26)

Usually support ____ :4

Support them about half of the time ____ :3

Mostly disagree with what they do ____ :2

Always disagree with what they do ____ :1 IDK ____ :0

9. Have you had the opportunity to help work on community problems?

No_____ :1   Yes_____ :2   (27)

GO TO 10

IF YES, HAVE THE RESPONDENT LIST THOSE PROBLEMS HE'S WORKED ON. FOR EACH PROBLEM FIND OUT THE KIND OF ACTION TAKEN.

	What problems have you worked on?....	In working on these problems, did you.... Take action on your own	Work with an organization	Or did you do both?	IDK	
LIST:	_____ (28/29)	_____	_____	_____	__	(30)
	_____ (31/32)	_____	_____	_____	__	(33)
	_____ (34/35)	_____	_____	_____	__	(36)
	_____ (37/38)	_____	_____	_____	__	(39)

10. We'd like to find out what problems you feel should be most important in planning water control and regional development in this area of the stat (Knife River Basin). I'm going to read a list of goals for development projects. For each one, tell me if you think it's "very important," "important," "somewhat important," or "not important."

	Very Important	Important	Somewhat Important	Not Important	IDK	
Maintaining or increasing wildlife areas is . . .						(40)
Consulting citizens and groups about local problems is . . .						(41)
To maintain or improve the standard of living is . . .						(42)
To bring in or increase heavy industry such as coal mining is . . .						(43)
To increase agricultural productivity is . . .						(44)
To increase the population of the region is . . .						(45)
To improve and increase recreational areas is . . .						(46)
To improve flood protection is . . .						(47)
To create jobs for young people is . . .						(48)
To preserve the present style of living in the area is . . .						(49)
To improve highways and transportation is . . .						(50)
To improve health care and medical services is .						(51)
To develop the tourist potential of the area is						(52)
To improve or extend telephone and electrical power service is . . .						(53)
	:4	:3	:2	:1	:0	

10. (continued)

	Very Important	Important	Somewhat Important	Not Important	IDK	
Maintaining or increasing scenic areas is . . .						(54)
To improve contact with extension agent, conservation service workers is . . .						(55)
To improve schools and other educational institutions is . . .						(56)
To improve police and fire protection is . . .						(57)
	:4	:3	:2	:1	:0	

10 a. Now try to imagine how agencies responsible for development might view these same problems. So for these next questions try to answer them as you feel someone in a government agency might.

In your opinion, would the government agency view:	Very Important	Important	Somewhat Important	Not Important	IDK	
Maintaining or increasing wildlife areas is . . .						(58)
Consulting citizens and groups about local problems is . . .						(59)
Maintaining or improving the standard of living is . . .						(60)
Bringing in heavy industry such as coal mining is . . .						(61)
Increasing agricultural productivity is . . .						(62)
Improving and increasing recreational areas is . .						(63)
Increasing the population of the region is . . .						(64)
Improving flood protection is . .						(65)
Creating jobs for young people is . . .						(66)
Preserving the present style of living in the area is . . .						(67)
Improving highways and transportation is . . .						(68)
Improving health and medical services is . . .						(69)
Maintaining or increasing scenic areas is . . .						(70)
Developing the tourist potential of the area is						(71)
	:4	:3	:2	:1	:0	

10 a. (continued)

	Very Important	Important	Somewhat Important	Not Important	IDK	
Improving or extending the telephone and electrical service of the area is . . .						(72)
To improve contact with extension agents and conservation service people is . . .						(73)
To improve schools and other educational institutions is . . .						(74)
To improve police and fire protection is . . .						(75)
	:4	:3	:2	:1	:0	

11. When agencies start water control projects in an area, they sometimes are forced to buy farmsteads, condemn property or divide it with channels and reservoirs. Have you ever been affected by this kind of action or are you familiar with others who have?

_____No :1 → GO TO #12

_____Yes :2 (76)

How fairly do you feel the agency handled the purchase of the property or gave you compensation? Were they . . . . .

...unfair _____ :1 (77)

...only somewhat fair _____ :2

...very fair, generous _____ :3

Why do you rate the agency this way?

____

____

____

______________________________ (78/79/80)

PROBE FOR SPECIFIC INCIDENTS

CARD 3
IDENTIFICATION
COLS 1-10

12. Do you feel there is a need for an improved water supply in this region?

_____definitely :4 (11)

_____probably :3

_____probably not :2

_____definitely not :1

_____IDK :0

13. Do you see a need for more parks and recreation areas as part of regional water development plans?

_____definitely :4 (12)

_____probably :3

_____probably not :2

_____definitely not :1

_____IDK :0

13 a. Imagine yourself in the position of telling state and federal development agencies what your community feels are its needs in developing recreation. We want your impression of community preferences as you see them, not your own. For each recreational development, tell me if the community feels it to be very important, important, somewhat important, or not important.

	Very Important	Important	Somewhat Important	Not Important	IDK	
Improve and increase recreational areas						(13)
Maintaining or improving wildlife areas						(14)
Maintaining or improving scenic areas						(15)
Develop the tourist potential of the area						(16)
	:4	:3	:2	:1	:0	

14. Do you feel that there is a flood or runoff control need in this area? (17)

_____definitely :4

_____probably :3

_____probably not :2

_____definitely not :1

_____IDK :0

15. This area has a growing coal mining industry and a potential to manufacture gas and generate electricity. Some see this growth as a benefit--providing more jobs, income and population. Others are worried about the harm mining may do to the landscape and pollution from industries. In your opinion, are these developments . . . . .

_____mostly an advantage for this region :1 (18)

_____mostly a disadvantage to this region :2

_____IDK :0

TRY TO GET CHOICE

15 a. In your opinion would these changes . . . . .

	..Better	..Same as now	..Slightly Worse	..Much Worse	Don't Know	
..make the quality of your water..						(19)
..make the quality of your air..						(20)
..make regional distribution and use of water..						(21)
..make travel in this area..						(22)
	:4	:3	:2	:1	:0	

16. Now put yourself in the position of telling regional and federal development agencies what your community feels its economic priorities are. We want your impression of community preferences as you see them, not your own. For each development need, tell me if the community feels it to be very important, important, somewhat important, or not important.

	Very Important	Important	Somewhat Important	Not Important	IDK	
Improvement of agricultural productivity						(23)
Bring in or increase heavy industry such as coal mining						(24)
To create jobs for young people						(25)
To increase the region's population						(26)
	:4	:3	:2	:1	:0	

17. Now we'd like to ask you a few questions about water control agencies. First, we'd like to know which agencies you think of as being involved in water control and area development.

Don't Know_____

IF R RECALLS AGENCIES, LIST THEM BELOW:

_______________________________________ (27)

____

____

____

(28/29/30)

2

18. Now I'm going to read you a list of statements people have used to describe these agencies. For each statement, tell me if you think it applies most of the time...sometimes...rarely...or not at all to the agency.

Does this statement apply . . . . .

	..most of the time	..some of the time	..rarely	..not at all	don't know	
Helpful to people						(31)
Ignorant of local needs						(32)
Honest in telling people about projects						(33)
Dependable, do what they say they're going to do						(34)
Unavailable for advice and information						(35)
Fair in paying for land, dealing with disputes						(36)
Wasteful of money and time						(37)
	:1	:2	:3	:4	:0	

18 a. HAND R THE CARD, SIDE A

We're concerned that people in this area have adequate information about coal development, gasification and power station construction. On this card are several areas people have told us are important to know about. Take a minute to look over this list--are there areas you feel important that we've left out? What are they?

IF YES, FILL IN THESE AREAS UNDER THE "OTHER" CATEGORIES BELOW. GIVE THE RESPONDENT A MOMENT TO THINK.

Now tell me the area you think most important to have information for--imagine you could choose only one.

MARK A "1" IN THE BLANK BY THE AREA R INDICATES AS MOST IMPORTANT.

Fine, now tell me which area is second most imporant.

MARK A "2" IN THE BLANK BY THE AREA R INDICATES AS SECOND MOST IMPORTANT.

Now, which area is third most important.

MARK A "3" IN THE BLANK BY THE AREA R INDICATES AS THIRD MOST IMPORTANT. CONTINUE ON THROUGH ALL BUT THE LAST REMAINING AREA IN THIS MANNER, MARKING THE APPROPRIATE RANK BY THE AREA INDICATED. MARK THE LAST AREA WITH A "5" OR APPROPRIATE HIGHER NUMBERED RANK IF R ADDED TO THE LIST IN THE "OTHER" CATEGORIES.

	AREA	RANKING	INFO ADEQ.	INFO NOT ADEQUATE	IDK	
A.	Effects of Mining on Land: damage, effectiveness of reclamation.	(38)				(39)
B.	Legal Problems with Land: mineral rights, rights of surface owner, land condemnation and compensation and compensation, leasing	(40				(41)
C.	Pollution and Conservation: effects on wildlife and water supply, water and air pollution	(42)				(43)
D.	Effects of Population Increase: new job opportunities, strain on community facilities, taxes	(44)				(45)
E.	Size and duration of coal development: How much land will coal mining eventually take over; how many years will the development last?	(46)				(47)
F.	OTHER--1 ____________	(48)				(49)
G.	OTHER--2	(50)				(51)
			:2	:1	:0	

Look at the list again. Tell me for each area whether you feel an adequate quantity and quality of information is available to the public or not. For the (first) area, do you feel available information is adequate or not adequate?

REPEAT THE LAST SENTENCE OF THIS QUESTION TO MOVE THROUGH THE ENTIRE LIST ONE AREA AT A TIME. MARK R'S RESPONSE IN TABLE ABOVE.

19. Do you hold any position of community leadership, such as an officer of the school district, local government, Chamber of Commerce, or church?

____No :1 ____Yes :2 (52)

We have just a few questions to ask people who are in positions of leadership in this community.

What positions in which organizations do you hold?

____

____

____

________________________________ (53-55/56 58/59-61/62-64)

PROBE FOR LIST

19 a. Are you personally acquainted with officials of the State Water Commission, Bureau of Reclamation, or Corps of Engineers?

____No :1 ____Yes :2 (65)

Tell me, is this a business acquaintance or a personal friend?

____business acquaintance :1 (66)

____personal friend :2

____both :3

19 b. As part of your civic duties, have you discussed the problems of water management and coal development with state and federal agency representatives in the past year?

____No :1 ____Yes :2 IF YES (67)

____IDK :0

Was the information they gave . . .

____satisfactory :1 (68)

____only partly satisfactory :2

____unsatisfactory :3

(a) Why was the information unsatisfactory, or only partly satisfactory?

____

________________________________ (69-70)

(b) Are there major questions you'd like to have answered by the agencies?

____

____

________________________________ (71-72-73)

(c) Have you discussed any of this information with others in your community?

No____ :1 Yes____ :2 (74)

IDK____ :0

(d) What kinds of people did you talk to about this information? Did you . . . . .

	NO	YES	IDK	
..talk to community officials?				(75)
..civic groups?				(76)
..friends and neighbors?				(77)
..have special meetings to deal with this information?				(78)
..talk with experts in water management and coal production?				(79)
..talk with the press or other news media?				(80)
	:1	:2	:0	

20. Have you talked with representatives of coal mining, gasification or electrical power firms about their activities in the state?

CARD 4 [illegible]
COLS 1-10

No____ Yes____

(a) Were you . . . . .

	NO	YES	IDK	
..asking about their plans?				(11)
..receiving prepared information?				(12)
..relaying public opinion to the firms?				(13)
..discussing your own business with them?				(14)
	:1	:2	:0	

19

(b) Were you . . . . .

..satisfied with the information you received? It was complete and seemed honest. _____ :1 (15)

..only partly satisfied? The information lacked details and can't be completely trusted. _____ :2

..dissatisfied? The information was vague, incomplete and probably misleading. _____ :3

IDK _____ :0

IF DISSATISFIED: Were you dissatisfied mostly because the information was misleading? _____ :1 (16)

..because the information was vague or incomplete? _____ :2

..because of both these reasons? _____ :3

..or some other reason? SPECIFY REASONS: _____ :4

_____

_____

(17/18/19/20)

21. Put yourself in the position of having to tell development agencies what people in your community see as their most vital future needs for community services. For each service, tell me if the community sees it as very important, important, somewhat important or not important.

	Very Important	Important	Somewhat Important	Not Important	IDK	
Flood protection						(21)
Better highways and transportation						(22)
Better health care and medical services						(23)
Better phone and electrical service						(24)
Better contact with extension and conservation service workers						(25)
Improvement of schools and other educational institutions						(26)
Better police and fire protection						(27)
	:4	:3	:2	:1	:0	

20

22. Have you heard about the Garrison Diversion Project and the McClusky Canal construction which will provide irrigation in the eastern part of the state?

_____No :1 Yes_____ :2

Do you have any opinion or reaction to this project? (28)

_____

_____

(29/30)

Finally, we'd like to ask a few questions about yourself, how you feel about where you live and where you get information.

---

23. About how many times in a week do you have a chance to . . . . .

..watch local news on TV _____times _____IDK (31)

..listen to local news on the radio _____times _____IDK (32)

..read a local newspaper _____times _____IDK (33)

..read an out-of-town newspaper _____times _____IDK (34)

24. If you were forced to choose one of these sources for all of your local news, which would you choose?

..television _____ :1 (35)

..radio _____ :2

..local newspaper _____ :3

IDK _____ :0

25. I'm going to read a few statements about living in this area--I would like you to indicate whether you strongly agree, agree, don't know, disagree, or strongly disagree with each.

	Strongly Agree	Agree	Don't Know	Disagree	Strongly Disagree	
Of all the places I've been, I like this place best.						(36)
People like me belong in this region.						(37)
This area is in my blood--it's really part of me.						(38)
	:5	:4	:3	:2	:1	

26. Here's a picture of a ladder. Imagine that the bottom rung on the ladder represents the poorest possible living conditions. The top rung represents the best possible living conditions. On which rung would you place your family today?

HAND R THE CARD, HAVE HIM TELL YOU THE NO. OF THE RUNG.

Today . . . . . Rung No._____ IDK_____ :0 (39)

Where on the ladder would you put yourself ten years ago? Rung No._____ IDK_____ :0 (40)

On what rung do you think you'll be in ten years? Rung No._____ IDK_____ :0 (41)

26 a. We'd like to know your impression of community opinion on the way of life in this area. For each statement below, tell me if the community feels it to be very important, important, somewhat important, or not important.

	Very Important	Important	Somewhat Important	Not Important	IDK	
To preserve the present style or way of living in the area						(42)
Consulting citizens and groups in solving local problems is						(43)
To maintain or improve the standard of living						(44)
	:4	:3	:2	:1	:0	

27. Now, just a few more questions . . . . .

a. About how many years have you lived in North Dakota?

_____years _____IDK (45)

b. How many years have you worked at your present occupation?

_____years _____IDK (46)

c. What is your age?

_____years _____IDK (47)

d. Where did you last attend school?

(Place)______________________________ (48)

What was the last grade you completed there?

(Grade)______________________________ (49)

Thanks for your cooperation; your answers will help regional planning.

INTERVIEWER: RECORD RESPONDENT'S SEX.

_____MALE _____FEMALE

WRITE YOUR NAME IN SPACE BELOW.

____

(Name)

quickly check
back for errors
and blanks

Agency Questionnaire

WEST RIVER AREA SURVEY

The University of North Dakota
Communication Research Center
and the
N.D. State Water Commission

Project # 625 (1-3)
Deck # 01 (4-5)
SUBJECT # ____ (6-8)
Card # 01 (9-10)

The State Water Commission and the Communication Research Center at the University of North Dakota are asking people in state agencies concerned with water management their ideas about the future development and current problems of the southwestern region of North Dakota. There are no "right" or "wrong" answers. We simply want your honest opinions on a number of questions. YOUR ANSWERS WILL BE KEPT CONFIDENTIAL. ONLY THE OPINIONS OF GROUPS OF PEOPLE TAKEN TOGETHER WILL BE REPORTED. Here are some hints to make it easier to complete this questionnaire.

1. Please answer all of the questions that apply to you. It's very difficult to analyze incomplete questionnaires.
2. Do not discuss your answers with others or go to reference books before recording them. We want your opinions based on what you recall.
3. Answer the questions in the order that they appear. This will speed your progress through the questionnaire.
4. Finish the questionnaire as soon as is convenient, slip it into the return envelope and drop it into the mail. It is NOT necessary to sign the questionnaire.

Thanks for your cooperation. This questionnaire will take only about 15-20 minutes of your time.

---

1. Most regions of North Dakota have problems and challenges in the near future. Think a moment, and list below what major problems you feel face particularly the southwestern section of the state (southwest of the Missouri River).

____ Can't think of any real problems or . . . . .

a. LIST PROBLEMS YOU FEEL AFFECT THIS AREA IN THE TABLE BELOW.

b. FOR EACH PROBLEM, INDICATE HOW FAST SOMETHING NEEDS TO BE DONE ABOUT IT.

	NEEDS WORK NOW (in next year)	PUT OFF AWHILE (in next 1-3 years)	PUT OFF A LONG TIME (can wait 3 years)	
Prob. 1 ____ (11-12)				(13)
Prob. 2 ____ (14-15)				(16)
Prob. 3 ____ (17-18)				(19)
Prob. 4 ____ (20-21)				(22)
	:1	:2	:3	

(Check off appropriate box.)

2. Many agencies exist to deal with regional development problems. Look back at the problems you listed on the first page of this questionnaire. Indicate in the box below those agencies you feel are best equipped to deal with each problem you listed.

PROBLEMS	AGENCY OR AGENCIES WHICH CAN HELP BEST	
Problem 1		(23/24)
Problem 2		(25/26)
Problem 3		(27/28)
Problem 4		(29/30)

3. We'd like to find out what you as a member of an agency involved in water management and regional development rate as the most important considerations in developing the southwestern (West River, Knife River Basin) area of the state.

FOR EACH STATEMENT, PLACE AN "X" IN THE BOX WHICH COMES CLOSEST TO THE LEVEL OF IMPORTANCE YOU GIVE IT IN BRINGING ABOUT DEVELOPMENT OF THIS REGION.

EXAMPLE: You view the matter of consulting citizen's groups only of moderate importance to successful development of the region.

MARK THE ANSWER:	MOST IMPORTANT	IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT	DON'T KNOW
..the opinions of interest groups in the area			X		

In developing the West River area	Most Important	Important	Somewhat Important	Not Important	Don't Know	
..maintaining or increasing wildlife habitat is . . .						(31)
..consulting citizens and groups about local problems is . . .						(32)
to maintain or improve the standard of living is . . .						(33)
to bring in or increase heavy industry such as coal mining and power generation is . . .						(34)
	:1	:2	:3	:4	:0	

3. (continued)

	Most Important	Important	Somewhat Important	Not Important	Don't Know	
In developing the [illegible] River area . . . . . to increase agricultural productivity is . . .						(35)
to increase the population of the region is . . .						(36)
to improve and increase recreational areas is .						(37)
..maintaining or increasing scenic areas is . . .						(38)
to improve flood protection is . . .						(39)
..creating jobs for young people is . . .						(40)
..preserving the present style of living in the area is . . .						(41)
to improve highways and transportation is . . .						(42)
to improve health care and medical services is						(43)
to develop the tourist potential of the area is . . .						(44)
to improve or extend telephone, electrical power service in the region is . . .						(45)
to improve contact with extension agents, conservation service personnel is . . .						(46)
to improve schools and other educational institutions is . . .						(47)
to improve police and fire protection is . .						(48)
	:1	:2	:3	:4	:0	

4. Now we'd like your estimate of the importance the general public in this region gives these problems:

In your opinion, does the public view . . .	Most Important	Important	Somewhat Important	Not Important	Don't Know	
..maintaining or increasing wildlife areas as . . .						(49)
..consulting citizens and groups about local problems						(50)
to maintain or improve the standard of living as . . .						(51)
to bring in or increase heavy industry such as coal mining and power generation as . .						(52)
to increase agricultural productivity as . . .						(53)
to increase the population of the region as . . .						(54)
to improve and increase recreational areas as . . .						(55)
to improve flood protection						(56)
..creating jobs for young people as . . .						(57)
..preserving the present style of living in the area						(58)
to improve highways and transportation as . . .						(59)
to improve health care and medical services as . . .						(60)
to develop the tourist potential of the area as . .						(61)
to improve or extend telephone, electrical power service in the region as . .						(62)
to improve contact with extension agents, conservation service personnel as . . .						(63)
to improve schools and other educational institutions as						(64)
to improve police and fire protection as . . .						(65)
..maintaining or increasing scenic areas as . . .						(66)
	:1	:2	:3	:4	:0	

5. As a general rule, do you feel state and federal water management agencies listen to and respond carefully to public opinion on regional water control and economic development projects? Do . . . . .

. . . they all respond? ______ :4 (67)

. . . most respond? ______ :3

. . . a few respond? ______ :2

. . . none of them respond? ______ :1

. . . don't know ______ :0

Can you recall which agencies you feel don't listen as much as they should?

____

____

____ (68/69/70)

6. In general, how would you rate the past performance of agencies carrying out water management projects in this area? Would you say their performance has been . . .

Don't Know______

______very good :1 (71)

______good :2

______fair :3

______poor :4

______very poor :5

Why do you rate them that way?

____

____

____

____

____

(Tell us in your own words; use back of page, if necessary.) (72-73/74-75)

7. When agencies carry out water management projects, they are sometimes forced to condemn property or divide it with channels and reservoirs. Based on your experience have people affected in this way . . . . .

______thought agencies were generally fair, generous in making compensation :1 (76)

______thought agencies were only somewhat fair :2

______thought agencies were generally unfair :3

______don't know :0

8. The State Water Commission together with other agencies are developing an extensive water control plan for the Knife River Basin. Are you working on or familiar with the general aims of this project?

No :1
Go to next question--
#9

______Yes :2 (77)

If you were in a position to tell the public of the Knife River Basin the advantages of this project, what advantages would you tell to them?

____

____

____

____

(List advantages in your own words in this space.) (78/79/80)

Most projects, however well engineered may have some drawbacks. What major problems, if any, do you feel the public should be aware of connected with this project?

____

____

CARD 2
1-10 ID

____

____

(List problems in your own words in this space.) (11/12/13)

The construction of a water control project in the West River area might have a number of specific effects. Listed below are some possible areas of impact. Indicate in the table the extent of impact in a given area.

FOR EXAMPLE: You believe tax revenues may decrease slightly as a result of the project. Mark the table:

	Increase Greatly	Increase Somewhat	Stay the Same	Decrease Somewhat	Decrease Greatly	Don't Know
Tax revenue will				X		

(continued next page)

8. (continued)

If No on #8, go to #9.

Because of extensive water control projects in the West River area (Knife River Basin), it's likely that . . . . .

	Increase Greatly	Increase Somewhat	Stay the Same	Decrease Somewhat	Decrease Greatly	Don't Know	
Tax revenues will							(14)
School enrollment							(15)
Flood protection will							(16)
Highway rerouting and reconstruction							(17)
Region's population will							(18)
Employment will							(19)
Police needs will							(20)
Property tax base will							(21)
Recreational areas will							(22)
Industry will							(23)
Noise congestion will							(24)
Ease of travel							(25)
Water quality will							(26)
Air quality will							(27)
Quality of regional water distribution will							(28)
	:5	:4	:3	:2	:1	:0	

9. Below are a number of statements people have used to describe agencies which help out in regional development. In the table, for each statement, mark the box which best describes how you think the PUBLIC views these agencies.

Does this statement apply . . . . .

	Most Times	Sometimes	Rarely	Never	Don't Know	
Helpful to people						(29)
Ignorant of local needs						(30)
Honest in telling people about project effects and costs						(31)
Dependable, do what they say they're going to do						(32)
Unavailable for advice and information						(33)
Fair in paying for land, dealing with disputes						(34)
Wasteful of money						(35)
	:4	:3	:2	:1	:0	

10. In your opinion, what is the most effective way to get information on water management projects across to the public in an area like the West River region.

_____through personal contact, talking to people in the area :1 (36)
_____by mailing out material to people :2
_____through extension and soil conservation agents :3
_____through radio, television and newspapers :4
_____through meetings with civic and farm organizations :5
_____don't know :0

11. If you have information that's important to people in the area of a water management project, how do you usually go about it? That is, whom do you see, what do you usually do?--Is there anyone in particular in your organization you go to?

____
____
____
____

(37/38/39)

12. Generally speaking, how well do you feel your organization does in getting information to the public: telling them what you're doing and what to expect?

______doing very well, information clear, going to all it should :1 (40)

______doing a good job, in most cases our information is clear and gets across :2

______doing a fair job, we've made some mistakes, probably not doing as much as we should :3

______doing a poor job, we don't have the time or money to do an effective job, which causes some confusion, problems :4

______doing a very poor job, we're really not doing anything we should be, causing much confusion, ill-feeling :5

______don't know :0

13. Imagine that your organization has virtually unlimited funds for public information and education. What steps, not now taken, do you feel your organization should use to better inform the public of your activities which affect them?

____

____

____

____ (41/42/43)

14. On the average, about how much of your working time is taken in describing to the public the activities of your organization?

______Most all of the time, 75 to 100% :4 (44)

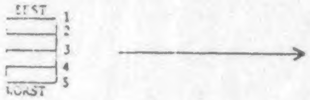
______Much of the time, 50 to 75% :3

______Some of the time, 25 to 50% :2

______A little of the time, 0 to 25% :1

______DK, can't say :0

15. Imagine a ladder. The bottom rung represents the worst possible living conditions. The top is the best possible living conditions. On which rung of the ladder would you place most people in the southwestern quarter of North Dakota TODAY?



______Don't Know :0 (45)

______# rung

16. Taking the same ladder, where do you think people of this area will be in 10 years from now?

BEST
1
2
3
4
5
WORST

______Don't Know :0 (46)

______# rung

17. We would like to ask a few general questions about you. Remember that your replies will be kept in confidence.

a. How many years have you lived in North Dakota?

______years (47)

b. How many years have you worked in your present job?

______years (48)

c. What is your age?

______years (49)

d. Check off the category that best describes your formal education.

______elementary school (grades 1-8) :1 (50)

______high school (grades 9-12) :2

______college, junior college, trade school (1 to 2 years) :3

______advanced college work (3 to 4 years college work) :4

______graduate or professional level work, advanced degrees :5

Finally, we'd like to get your opinion on several natural resource problems and their possible solutions. Basically, we want to know how strongly you agree or disagree with the solutions listed.

18. EXAMPLE: A village has the choice of building a municipal pool, or of developing a public beach at a nearby lake. The cost would be equal.

	Strongly Favor	Favor	Slightly Favor	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Don't Know	
How would you feel about the pool?									(51)
About the beach?									(52)
	:7	:6	:5	:4	:3	:2	:1	:0	

If you were strongly opposed to the pool, you'd check "strongly disagree." If you were neutral on developing the beach, you would check the "neutral" position midway on the scale. MARK YOUR OPINIONS ON THE EXAMPLE, THEN GO ON WITH THE REST OF THE QUESTIONNAIRE.

19. Within a decade, some parts of North Dakota will experience serious water shortages. This situation may call for increased control over the use of water, or for increasing the supply of water by building more dams and reservoirs.

	Strongly Favor	Favor	Slightly Favor	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Don't Know	
How do you feel about increased control on water use?									(53)
About building more dams and reservoirs?									(54)
	:7	:6	:5	:4	:3	:2	:1	:0	

20. Flooding has become a serious problem in many parts of North Dakota. Generally, floods have been controlled with dams, and through planting trees and other ground cover.

	Strongly Favor	Favor	Slightly Favor	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Don't Know	
How do you feel about controlling floods with dams?									(55)
About planting trees and other ground cover?									(56)
	:7	:6	:5	:4	:3	:2	:1	:0	

21. Most states have problems in setting up new lake recreation areas. They must decide whether they should acquire access to natural lakes in areas where they are found, or develop new, man-made lakes in parts of the state that don't have them.

	Strongly Favor	Favor	Slightly Favor	Neutral	Slightly Disagree	Disagree	Strongly Disagree	Don't Know	
How do you feel about acquiring access to natural lakes?									(57)
About developing new, man-made lakes?									(58)
	:7	:6	:5	:4	:3	:2	:1	:0	

Thanks for your cooperation. Please place this questionnaire into the addressed, stamped envelope and place it into the mail. Please do not sign the questionnaire.